A Comparative Analysis of Selected Aspects of Educational Change: Slovenia and England

Monika Tratnik

Thesis Submitted to the University of London

For the Degree of Ph.D.

1996

University of London

Institute of Education

Comparative Education: Culture Communication and Societies

Abstract:

The thesis explores Educational Management Information Systems in Slovenia and England from a comparative perspective. The thesis evolves from the argument that postindustrial social developments mean a major shift in educational management in general, and in educational management information systems, as parts of educational management. The main argument, methodology, and organization of the thesis are explained in Chapter One.

Chapter Two focuses on an overview of some of the theories about industrial and postindustrial societies; including theories of the 'information society', postmodernity, and postfordism; explores educational change in industrial and postindustrial societies; and thirdly, analyzes selected concepts of general and educational management which have developed in the twentieth century.

In Chapter Three this larger theoretical framework is narrowed and refined by analysis of the concepts of an educational information system which evolved and developed within particular management theories. First, this thesis' definition of an EMIS is offered; second, principles of educational management in industrial and postindustrial social settings are explored; and third two ideal typical models of EMIS, 'fordist' and the 'postfordist', are delineated.

Chapter Four and Chapter Five focus on contemporary social and educational contexts, the empirical research, and the analysis of findings in Slovenia and England.

Empirical data on the two countries of England and Slovenia, collected through interviews and documents and analyzed in the previous two chapters, are compared in Chapter Six. In the same chapter these data are contrasted with the two ideal typical EMIS models. Chapter Six also provides an overall interpretation and concludes by outlining several policy implications of the thesis.

Acknowledgements:

Over the course of almost four years, spent on writing this thesis, I have become indebted to many individuals. To my supervisor, Dr. Robert Cowen, above all, I am grateful for his continuous support regarding every aspect of my study in London. His warm encouragement and insight into world wide education issues have guided me successfully throughout this long, often difficult, work.

My thanks go to Dr. Paul Hurst, who was an important source of inspiration and encouragement in the early days of my study at the Institute of Education.

I am grateful to Dr. Martin McLean and Mr. Crispin Jones for their valuable suggestions about early drafts of this study. Special mention must be made of Mrs. Pat Tunstall, who generously helped me with access to the field work possibilities in England.

Special thanks go to mag. Ferdo Rečnik and other colleagues in the Board of Education and in the Ministry of Education and Sport in Slovenia for all their help and support.

I also wish to thank teachers and other school staff, pupils, and advisers, who spared their time for interviews and offered me much valuable information on their practice in schools and in governmental agencies.

Finally, to my mother, Mrs. Magda Tratnik, my sons Alan and Jan, and all the members of my family, I express my gratitude. They were always encouraging me to complete this study.

CONTENTS

From the time of Gutenberg, and even before, information production has been controlled and has led to social stratification based on unequal access. What is of special significance about the current situation, is the centrality of information in all spheres of material production, as well as its increasing prominence throughout the economy. Today, information increasingly serves as a primary factor in production, distribution, administration, work, and leisure. For these reasons, how information itself is produced and made available become crucial determinants affecting the organization of the overall social system.

Herbert I. Schiller

('Paradoxes of the Information Age'
Paper for the Conference on Microelectronics
Santa Cruz, California, May 1983)

Chapter 1: INTRODUCTION

1.1 Purpose and structure of the chapter

The purpose of this chapter is to introduce the topic of the thesis, the main argument, and the theoretical and empirical choices of the thesis.

The discussion is in four parts. Firstly, the central theme of the thesis is introduced. The second part presents the background and the focus of the thesis, and outlines the main argument. The third part explains the methodological approach. Finally, in the fourth part, the organization of the thesis is presented.

1.2 The topic

This thesis analyses information management systems, within education, with special reference to two societies, England and Slovenia. Both societies have changed in the last two decades and, in the context of general educational reform, both societies are struggling to redefine what the information needs of their education systems are.

1.3 The background[1] to and the focus of the thesis

In the last six or so years Slovenia has been going through major political and economic changes. A transition from the socialist political system and economy to a parliamentary and capitalist society is taking place. Presently the principles of a free-market economy and new ideas of a welfare state are mixed with the residues of the old socialist system. The political developments are related to problems in the national economy. Slovenia is an industrialized country with a large service sector. The old political system had become a deterrent to further economic expansion.

With the changes in the political system and the economy, changes in education are underway. Public discussions and published works in recent years[2] show that the Slovene education system is expected to provide suitable education in accordance with individual needs and social development. Young people and their parents, teachers and educational managers, educational theoreticians and employers want education to become more responsive to the changing world.

In Slovenia the new Constitution (1991), the developments in the curriculum, and the organizational innovations symbolise a transformation of the framework of education. The new Slovene Constitution in article 57 declares that:

> (i) education is free; (ii) education in primary school is compulsory and is publicly financed; and (iii) the state provides opportunities for citizens to acquire suitable education.[3]

Although a great part of the old educational legislation has not yet been replaced (at the time of the writing of this chapter), the developments in curriculum and educational system indicate that reform is already taking place. The so called 'System of Oriented Education'[4] (*sistem usmerjenega izobraževanja*) which was a central principle in education since 1980 is being slowly abandoned and a new curriculum is replacing it. In the last few years the emphasis has also been on the development of new educational legislation and the reorganization of the management and administration structures of the educational system.

This thesis studies these changes in educational management and in the educational management information system in Slovenia in the last six or seven years. As counter-point, in studying the development of educational management and information systems in education, this thesis uses England[5]. In England too, the changes in economy and educational policies of Conservative governments in the last fifteen or so years have contributed to new developments in educational management and in educational management information systems. Unlike Slovenia, the major reform of English education started with the introduction of detailed new legislation, of which the most important is the Education Reform Act in 1988. As a consequence of this Act, the National Curriculum has been gradually introduced in primary and secondary schools, and the management and financing of education have changed dramatically. This thesis concentrates on educational management developments in both countries.

The main aim of this thesis is to explore educational information systems

and their role within educational management. While focusing on the analysis of educational management information systems, the thesis is located within, and tries to contribute to an understanding of, the wider framework of educational management concepts in postindustrial societies.

The thesis begins with the initial assumption that social changes in postindustrial societies in the last decades have influenced how educational systems and institutions have been managed. The thesis assumes initially that there are certain principles of educational management that are typical of organizations in industrial societies and that they change with the development of postindustrial social contexts. These assumptions are explored and evolve into the argument pursued by this thesis.

The main argument of the thesis is that in postindustrial societies information systems, as parts of educational management, differ in identifiable ways from educational management information systems in industrial societies. The identifiable differences can, it is suggested, be theoretically operationalized through two ideal typical models, and these models are empirically tested in the contexts of two countries.

Within this general argument the thesis follows three subarguments. Firstly, the thesis shows why in highly dynamic, postindustrial societies - where information is becoming a central commodity - exploring and developing information systems is of crucial importance for educational management. Secondly, this thesis tries to show that fordist and postfordist ideal typical models of educational management information system (EMIS) can be

constructed. Thirdly, the thesis claims that the two ideal typical EMIS models and the field work can be used as a research framework in different social settings (here, England and Slovenia) to form a comparative understanding of change.

1.4 Methodological issues

The literature offers many different theories of educational management within which a wide variety of research approaches have been developed[6]. In contrast educational information systems have not been much researched; at least not from a social science perspective.

This thesis will use a comparative analysis of educational management information systems in two countries as the research approach. Within this, the emphasis will be on exploratory research methods[7]. The management of information systems in education will in this thesis be explored as a social phenomenon, as an expression of relationships between people who constitute and are related within educational systems. The work aims at a qualitative interpretation[8] of EMIS in comparative perspective.

While using the term 'information system' and locating it within educational management, general system theory approaches[9] and a functionalist perspective "as a particular form of the systems approach in the social sciences"[10] will be avoided. The emphasis of the research methodology of this thesis will be on "reflections of change and on the

framework and limitations of action in the world of large organizations and within complex cultural systems."[11] Underpinning this general approach are three main methodological propositions which shape the development of the thesis: that wider social developments influence educational management; that information systems are best studied within the larger context of the management of education; and that comparative analysis of EMIS in two countries will permit the refinement of general principles of interpretation of the EMIS phenomenon.

Before the comparison the thesis first develops an understanding of an educational management information system (EMIS). This is necessary because, it will be suggested, the existing literature defining EMIS is not appropriate for a comparative analysis. This thesis brings together different interpretations of EMIS from the literature; and then, it re-organizes and redefines them in a manner which will offer possibilities for further comparative work and theorizing in the thesis.

In the thesis, as pointed out above, two ideal typical models of EMIS will be conceptualized: the Fordist ideal typical model related to industrial societies and a Postfordist model related to social developments in postindustrial societies. The two ideal typical models will form the basis of the comparative analysis. In the sociological literature ideal typical models, also called ideal types, were first introduced by Max Weber.[12] In his writings the ideal types represent a theory of concept formation in the social sciences. This is explained by Weber in *The Methodology of the Social Sciences*:

> In the establishment of the propositions of abstract theory, it is only apparently a matter of 'deductions' from fundamental psychological motives. Actually, the former are a special case of a kind of concept-construction which is peculiar and to a certain extent, indispensable, to the cultural sciences.[13]

Weber argued that 'naturalistic dogma' had infiltrated the social sciences, but that the exact theories and empirically constructed laws of social events cannot solve the problematic relationship between 'theory' and 'history' in construction of new knowledge.[14] In this respect Burger writes that "Weber's theory of concept formation... depends on the fact that humans embody cultural values in certain phenomena"[15], and that human "inner states"[16], i.e. their motives, plans, affects, emotions, etc. "cause their actions and thereby give these actions their subjective meanings"[17], or their *'Verstehen'* (understanding).

Weber thus suggests that the relationship between the construction of analytical concepts and abstract social theories on one hand and reality with its empirical data on the other can be made "*clear* and *understandable* by reference to an *ideal-type*."[18] Ideal types in this understanding are concepts about empirical reality but abstracted from reality. Ideal types are

> explanations - accomplished in the form of a concept - of historical events by reference to the circumstances which made their existence possible...[19]

Burger, in his contemporary commentary, explains that the form of an ideal type is general but the conceptual content is abstracted from the empirical reality in an idealizing or exaggerating way.[20] In this sense the ideal types

are models of 'translated'

> structural properties of social groups into the interplay of diverse types of individual actions in a fashion which is exemplary for a whole set of empirical cases...[21]

The importance of the ideal types for social science methodology has been described by Schutz:

> Again and again Weber refers to the problem of the ideal type as the central problem of all the social sciences. Our studies have shown how well founded this conception is. For the world of contemporaries and the world of predecessors can only be comprehended in an ideal-typical way.[22]

Ideal types are methods of interpretive sociology. They "serve as interpretive schemes"[23] representing different aspects of empirical reality. In this interpretation, the ideal types do not describe particular aspects, but they permit an approach to them. Although ideal types resemble definitions, they are not. Burger explains that:

> It must not be taken for granted in an a priori fashion that the [ideal typical] model is an exact replica... of all the empirical instances to which it is intended to refer. As a matter of fact, the opposite is usually correct.[24]

Drawing on Weber, and later interpretations of Burger and Schutz, this thesis then chooses ideal typical modelling as its central methodological approach. Taking into account the complexity of social reality, the thesis uses ideal types to give greater analytic coherence in the approach to the EMIS phenomenon in theoretical analysis and tests the ideal types against empirical reality.

The two ideal typical models of fordist and postfordist EMIS, constructed in this thesis, will establish classifications of EMIS elements and suggest categories for empirical research. Their bi-polar nature is intended to offer an understanding of "a range of deviations from them."[25]

1.5 Organization of the thesis

The thesis is organized in three main parts and six chapters. Chapters One, Two, and Three represent the first, the theoretical, part of the thesis. In this part after the statement of the research argument and the methodological stance, the theories of industrial and postindustrial society, and of general and educational management will be analyzed. In the same part a possible structure of educational management information system will be conceptualized and the two ideal typical models of EMIS developed.

Part two of the thesis (Chapters Four and Five) will be the study of the two countries. In particular, educational management developments and educational information systems will be explored in Slovenia and England through the analysis of selected literature, and through the analysis of interviews conducted in schools and with educational authorities.

The third part of the thesis will be a discussion about the relation of the theoretical framework to the comparison of findings from the field in England and Slovenia. The comparison between the two countries will be presented in Chapter Six. In the same chapter the theoretical propositions

and the empirical interpretations will also be contrasted; this chapter also concludes the thesis, with suggestions for policy developments.

1.6 Notes

1. Slovenia and its educational developments will be discussed in Chapter Four of this thesis.

2. Perhaps the most significant, among recently published works, are the three proposed conceptions for the future of education in Slovenia:

   Rečnik, F. (ed.) Izobraževanje v Sloveniji za 21. stoletje: Globalna koncepcija razvoja vzgoje in izobraževanja v Republiki Sloveniji [Education in Slovenia for the 21st century: The global conception of the development of upbringing and education in the Republic of Slovenia]. Ljubljana: Zavod RS za šolstvo in šport, 1991.

   Piciga, D. (ed.) 'K novi koncepciji osnovne šole' [Towards the new conception of the primary school]. Didakta. Marec, 1992.

   Krek, J. (ed.) Bela knjiga o vzgoji in izobraževanju v Republiki Sloveniji [White book on upbringing and education in the Republic of Slovenia]. Ljubljana: Ministrstvo za šolstvo in šport, 1995.

3. Source: Uradni list Republike Slovenije [The Official Gazette of the Republic of Slovenia]; 33/91.

4. One of the major intentions of 'Oriented Education' [*usmerjeno izobraževanje*] was to tie education closely to the economy by providing a mixture of general knowledge and professional skills [see also Chapter Four].

5. Even though Wales and England have a similar educational system and the same central authority, this thesis uses only the term England, because the empirical part of the research is limited to English schools and local authorities.

6. Hodgkinson, C. 'Foreword'. In Greenfield, T. and Ribbins, P. (eds.) Greenfield on Educational Administration: Towards a Human Science. London: Routledge, 1993.

7. Cohen and Manion quote Harré and Secord who distinguish between 'exploration' and 'experiment'. Harré and Secord argue that an experiment is used to test the authenticity of what is known, while an exploration starts with what is unknown. In exploration the researcher does not start with clear ideas about what will be the outcome of the research. The researcher has a feeling about which

direction to go, but does not know what to expect. Cohen, L. and Manion, L. Research Methods in Education. London: Routledge, 1989; Harré, R. and Secord, P.F. The Explanation of Social Behaviour. Oxford: Basil Blackwell, 1972.

8. Different sources (Cohen and Manion, op.cit.; Le Compte et al.; Patton) consider interpretive and/or qualitative research methods as anti-positivist. These methods do not tend to follow the methods of natural science, but rather tend to understand human experience in a subjective manner. Le Compte, M.D., Millroy, W.L., Preissle, J. (eds) The Handbook of Qualitative Research in Education. San Diego: Academic Press, 1992; Patton, M.Q. Qualitative Evaluation and Research Methods in Education. Newbury Park: Sage, 1990.

9. The thesis does not consider that organizations and educational systems are "equivalent to other living or open systems, which are sets of components interacting purposefully within a boundary that filters inputs and outputs... [and where] interaction is the exchange of energy and information among components."

   Quotation from: Silver, P. Educational Administration. New York: Harper and Row, 1983, p.359.

10. Cohen, P.S. 'Functional Analysis'. In Kuper, A. and Kuper, J. (eds.) The Social Science Encyclopedia. London: Routledge and Kegan Paul, 1985, p.324.

11. Crozier, M. The Bureaucratic Phenomenon. London: Tavistock Publications, 1964, p.9.

12. Burger, T. Max Weber's Theory of Concept Formation: History, Laws, and Ideal Types. Durham: Duke University Press, 1976.

13. Weber, M. The Methodology of the Social Sciences. New York: The Free Press, 1949, p.89.

14. Weber, op.cit.

15. Burger, op.cit., p.102.

16. ibid.

17. Burger, op.cit., p.103.

18. Weber, op.cit., p.90.

19. Burger, op.cit., p.127.

20. Burger, op.cit.

21. Burger, op.cit., p.175.

22. Schutz, A. The Phenomenology of the Social World. London: Heinemann Educational Books, 1972, p.226.

23. Schutz, op.cit., p.185.

24. Burger, op.cit., p.177.

25. ibid.

Chapter 2: INTERPRETATIONS OF INDUSTRIAL AND POSTINDUSTRIAL SOCIETIES, MANAGEMENT, AND THE MANAGEMENT OF EDUCATION

2.1 Introduction

The purpose of this chapter is to outline some of the classical understandings of industrial society and the evolution of a specific type of management within such societies; to analyze different ways of interpreting postindustrial society including changes in the ways management is understood within such societies; and to choose a perspective and a vocabulary through which to approach further analysis of management and information systems.

The main argument of this chapter is that with the development of industrial society a specific type of educational management emerged, and that management patterns, in education, change with the rise of postindustrial society.

To clarify this main argument three subarguments will be tested. First, it will be argued that different social theories show the ways in which changing modes of economic and social production contributed to the rise of industrial society and later to the development of postindustrial society; second, that changes in education in both kinds of society have affected the

management of educational systems; and thirdly, that the theories and practices of educational management in this century have been influenced by the development of management thought and management practice in industry and business.

Thus, the chapter is organized in three parts. The first part is the analysis of different ways of thinking about industrial and postindustrial societies. The second part narrows down the discussion, focusing on major changes in educational systems since the introduction of mass schooling. The third part brings together identified interpretations of social changes and educational developments and relates them to management. This part of the chapter includes tracing the development of educational management thought and practice in industrial and postindustrial societies. Major developments in the area of general management are analyzed and their influence in education is discussed: management in general and management of education are, as this thesis argues, related to wider social developments.

The first part of the chapter reviews social changes in industrial and postindustrial society and analyzes the characteristics that are thought, in the literature, to distinguish one kind of society from another.

2.2 The analysis of social developments

The nineteenth and especially the twentieth century have been times of

major social transformation.[1] The impact of the social changes which started in Western Europe has been global.[2] These changes have "totally dissolved the forms of social organisation in which humankind had lived for thousands of years in its previous history."[3]

These changes are rooted in the two great revolutions: the French Revolution in 1789, and the Industrial Revolution at the end of the 18th and beginning of the 19th century. For many writers[4] these two revolutions mark the beginning of a new social era - that of industrial society. The French Revolution (followed by more or less overt revolutions in other countries) with its postulates of liberty, equality and fraternity represents some of the political elements in the transition from tradition to modernity[5]. Such political revolutions in some countries opened up a social space for subsequent industrial revolutions. Although the term 'industrial society' implies technical inventions in production, its meaning is usually more broadly interpreted.[6] 'Industrial society'[7] stands for a pattern of social and economic changes[8] within which technical inventions like the steam engine and the mechanization of production were only a part[9].

The rise of this new type of the society stimulated the development of the social sciences, notably through the work of Emile Durkheim, Karl Marx, and Max Weber. Their ideas were a response to the creation of industrial society, and their ideas have been a stimulus to subsequent analysis. Their thinking also has implications for the educational management literature.

2.2.1 Interpretations of industrial society

Weber, Durkheim, and Marx offer different interpretations of the reasons for social changes within industrial society. They agree on the point that an increasingly complex division of labour and increased differentiation of social life constitute the core characteristics of an industrial society.

Marx and Durkheim shared an assumption in their view of society: somewhat independently of the individual's will, society shapes its own development throughout history[10]. For Marx, the generators of social change are the tensions between the forces of production and the relations of production, which lead to a class struggle. The class struggle, for Marx, exists in any point of time and, in itself, generates social development. For Marx, industrial society emerged as a result of technological change and the accumulated class conflicts of the late feudal society.[11]

In Durkheim's work the sources of social change are different from those of Marx. Durkheim viewed modern industrial society as a 'mass society' - not in terms of numbers but rather in terms of the modalities of its interactions. In his book *Division of Labor in Society*[12] he explains the breakdown of the old, traditional segmentation of the society and the emergence of new social forms: a complex division of labour, structural differentiation, and increased interaction between people. Thus increased interaction leads to a greater social differentiation and specialisation. Society, for Durkheim, is characterized *sui generis* by a cohesive force - solidarity, which in modern society changes from 'mechanical' to 'organic'[13].

In this view the increased complexity of the division of labour is seen as a step towards a more co-operative society[14].

For Durkheim, then, the nature of moral cohesion changes in the transition from traditional to modern society. Max Weber's interpretations of how protestant moral values were crucial in the development of industrial society[15] represent a similar stress of the significance of values in social developments. In Weber's works social changes are explained by his theory of the "legitimacy characteristic of different social orders, the forms of organization characteristic of each type, and their sources of instability."[16] The rise of a modern industrial society in the nineteenth century was for Weber accompanied by asceticism, secularization, differentiation of the various spheres of life, bureaucratization of economic, political and military practices and a growing monetarization of values.[17] Weber showed that a number of new institutions had emerged to organize newly created spheres of social life and that these institutions were 'rational'. The 'rational', which for him also meant the most efficient organization[18], was not limited to industry, but extended "throughout the polity, army, and other sectors of the society in which large scale organizations become prominent."[19] The shaping of industrial society took time.[20]

In this period, one of the major principles dominating social changes, in Weber's interpretation, was the principle of 'rationalization'.[21] For Weber rationalization has varied consequences. Gerth and Mills explain:

> 'rationalization' is thus measured negatively in terms of the degree to which magical elements of thought are displaced, or positively by the extent to which ideas gain in systematic

coherence and naturalistic consistency.[22]

In his works Weber also showed how the principle of rationalization affected all spheres of social life and became the most significant principle in the reorganization of work.[23] Following Weber, Crozier points out that "The development of large organizations constitutes one of the essential characteristics of modern industrial society"[24], arguing that larger economic units, in comparison to small enterprises of the early industrial period, were much more predictable, rational, and stable.[25]

The concern for the development of rational modern organizations, whose efficiency was expressed through concepts of money, time and control, as this chapter discusses later, intrigued the early scientific researchers working on human organizations and their management.[26] Studies of organizations entered a new epoch.

The industrial era that started at the turn of the century has been defined as a 'fordist' one by some social analysts.[27] The proponents explain that the mass production of standardized goods with special purpose machinery was pioneered and introduced into production lines by Henry Ford.[28] Ford did not, as Murray explains, invent the four main principles of 'fordism', he just combined and adapted Taylor's principles of 'scientific management' for the first time in the production of cars.[29] The four main principles of fordist production, following Murray, are:

a) products were standardised; this meant that each part and each task could also be standardised. Unlike craft production - where each part had to be specially

designed, made and fitted - for a run of mass-produced cars, the same headlight could be fitted to the same model in the same way.

b) if tasks are the same, then some can be mechanised; thus mass production plants developed special-purpose machinery for each model, much of which could not be switched from product to product.

c) those tasks which remained were subject to scientific management or Taylorism, whereby any task was broken down into its component parts, redesigned by work-study specialists on time-and-motion principles, who then instructed manual workers on how the job should be done.

d) flowline replaced nodal assembly, so that instead of workers moving to and from the product (the node), the product flowed past the workers.[30]

Because of Ford's huge success in cutting the costs of the final products, fordism became the most influential production principle in the twentieth century, and received its theoretical explanations from Taylor in his principles of 'scientific management'.[31]

The sociological consequences of fordist production were important. The first analysis of a 'fordist society' was done by Gramsci in 1930s. In his work *Americanism and Fordism*[32] he identifies fordist social implications as marking a new epoch of civilization[33] within advanced capitalism. Murray, one of the current writers on fordism, argues that the impact of fordism:

> can be felt not just in the economy, but in politics (in the mass party) and in much broader cultural fields - whether American football, or classical ballet (Diaghilev was a Taylorist in dance), industrial design or modern architecture. The technological ***hubris*** of its outlook, its Faustian bargain of dictatorship in production in exchange for mass consumption, and above all its destructiveness in the name of progress and the economy of time, all this places Fordism in the centre of modernism.[34]

He explains that fordist production is "marked by its commitment to scale and the standard product; by a competitive strategy based on cost reduction; by authoritarian relations, centralized planning, and rigid organization built round exclusive job descriptions."[35] This has meant the rise of a specific economic culture. The principles of this economic culture were extended beyond industries to agriculture, services, and some aspects of the state, and culture in general.[36] These principles become a subject of critique within the theories of postindustrial society.

2.2.2 Interpretations of postindustrial society

From the late 1960s onwards a shift in thinking about industrial societies can be observed. Technological changes that occurred during the last twenty or so years have contributed to changes in the form of advanced capitalist societies.[37] Authors, such as Bell and Touraine, introduced the concept of the 'postindustrial' society into contemporary social analysis.[38]

Bell, in his book *The Coming of Post-Industrial Society*[39], writes that:

> the industrial society of the twentieth century, with it dependence on technology and science, is far different from the manufacturing society of the previous two centuries.[40]

He therefore anticipates (in 1973) that "in the next thirty to fifty years we will see the emergence of... 'the post-industrial society'", which will be "primarily a change in the social structure, and its consequences will vary in societies with different political and cultural configurations."[41]

According to Bell, the industrial revolution meant a shift in employment from the farm to the factory, while postindustrialism is characterized by a shift of employment from the factory to the office and shop.[42] Bell uses the example of the United States to classify the development of societies in three phases: the preindustrial society - when most of the people were employed on the land; the industrial society - when the majority work in manufacturing industry; and the postindustrial society - when the dominant form of work is the service industries.[43] The clear distinction between manual and intellectual work is disappearing and services are the most rapidly growing sector of the postindustrial economy.[44]

Giddens also notes that work in postindustrial societies has been reorganized around new technologies and in a flexible time setting, with major redundancies, mostly in manufacturing.[45] At the same time the welfare state in many countries seems to be ill equipped to cope with unemployment.[46]

The central interpretation of the subsequent writings on postindustrial society (i.e. after Bell) is that principles of production, work, consumption, and shaping of the living environment, on which industrialism was based, have altered. Further evidence of the shift was visible in changes which started in the 1970s with the decline in productivity growth, the decline of investment, the fragmentation of markets, the increasing instability of demand, and the rise of oil prices in 1974.[47] Thus, Murray argues that from the late sixties "we can see a fracturing of the foundations of predictability on which Fordism was based."[48]

Overall, then writers on postindustrial society consider that technological inventions have been once again changing the economy and society. The main consequences of this shift are explained by Hall and Jacques:

> the world has changed not just incrementaly but qualitatively..., advanced capitalist societies are increasingly characterized by diversity, differentiation, and fragmentation, rather than homogeneity, standardization and the economies and organizations of scale which characterized modern mass society.[49]

However, different social analysts offer different interpretations of postindustrialism and its social patterns: interpretations vary from country to country, from author to author. Watkins, for example, suggests that the "New Times perspective... sees post-Fordism in cultural terms as postmodernism."[50] Erault changes the vocabulary and writes of the information society:

> Most of the salient characteristics of an information society are transitional, but the problems posed assume somewhat different forms in different economic and cultural contexts... the expression 'information society'... does not yet have any unequivocal meaning; there are still widespread ambiguities. The expression has three main meanings:
>
> 1. The quantity and rate of distribution of information by all the media with the emphasis on its diffuseness and rapid obsolescence.
> 2. The quantity of information classifiable, usable and analyzable by the new computer technologies, with the emphasis on the theoretical potential of the information and the need for making it more accessible.
> 3. The central role played by knowledge, particularly knowledge with well-defined purpose in modern society; knowledge is seen as an important factor in productivity.
>
> These three meanings are combined in various permutations

> depending on whether the prevalent cultural attitude is one of acceptance or refusal, and correspond to a vast interconnected range of positions in society, intellectual circles and the schools themselves.[51]

One of the attempts to systemize these interpretations was by Kumar who suggests that there are three main groups of theories about postindustrial societies: information society theories, postfordism, and postmodernism, which all overlap with one another.[52] What these three strands share is the notion that technological development, especially computerization and the media revolution, have changed modes of economic production and the way social life is shaped.[53] There are also differences of interpretation between the theories.

The 'information society' theories consider growing knowledge and greater availability of information as major social change agents: societies move into an era dominated by information technology, and they are not as in the past dominated by manufacturing industry.[54] Bell, the classic writer on the 'information society', explains that knowledge and information in today's 'information society' are replacing labour and capital as the central resources of production.[55] He suggests that:

> technology (including intellectual technology) and the codification of theoretical knowledge as a new principle for innovation and policy [are] reshaping the techno-economic order, and with it, the stratification system of the society as well.[56]

Early writings on information based societies like those of Bell, Drucker[57], and Toffler[58] have been widely discussed and also criticized. One of the

criticisms was that their "notion of a post-industrial society continues the technological determinism... of the theory of industrial society"[59]; and that Bell is "an ideologue of technocracy and an apologist for the system itself."[60] The popularity of the early postindustrial concepts and the optimistic views they embodied diminished after the crisis in the mid 1970s.[61] In the 1980s the concepts of postmodernity and postfordist society emerged.

However, an overlap between ideas about the 'information society' and postmodern social concepts can already be found in the works of Bell.[62] While Bell enthusiastically anticipates the 'information society', he also tends to be quite negative about some likely developments. Among the negative consequences that Bell anticipates are a general decline of living standards; erosion of the creative energy of Western capitalism as a consequence of economic and technological innovations and their impact on cultural production and consumption; and above all a loss of belief in Western civilisation, which will become the central problem of the social crisis.[63]

Nevertheless, no simple definition of postmodernity and postmodernism is possible. Coulby and Jones while noting that "Postmodernity has shifted from being a way of describing cultural products... to a way of describing society..."[64], also point out that the:

> distinction between modernity and postmodernity seems to have as many definitions as there are writers on the topic... The concept of postmodernity itself is, however, too diverse, fractured and self-conscious, to allow... a systematic approach.[65]

Thus, Coulby and Jones suggest that postmodernity is not understood as "an alternative to modernism... [but] it is rather a sequence of critiques of it"[66]; and Smith stresses that postmodern criticism is conditioned by the specific social and political conditions "in which voices from the margins have challenged the hitherto accepted dominance of heroic white western male actors and universal theorizing."[67]

Similarly, Bauman suggests that postmodernity has different meanings for different people[68] and argues that:

> postmodernity can be seen as restoring to the world what modernity, presumptuously, had taken away... [it] does not seek to substitute one truth for another, one standard of beauty for another, one life ideal for another. Instead, it splits the truth, the standards and the ideal into already deconstructed and about to be deconstructed.[69]

The point is picked up by secondary commentators such as Lowe, who argues that postmodernism is like postmodernity "a complex phenomenon taking on different meanings and applying different arguments in different contexts."[70] In the same way Smart argues that:

> Diverse and at times conflicting references to postmodernism and postmodernity are to be found in a growing number of disciplinary fields and across an increasingly broad range of discursive formations.[71]

Equally clear about the lack of specificity are Usher and Edwards who argue:

> To talk about postmodernity, postmodernism or the postmodern, is not... to designate some fixed and systematic 'thing'. Rather it is to use a loose umbrella term under whose broad cover can be encompassed at one and the same time a

> condition, a set of practices, a cultural discourse, an attitude and a mode of analysis.[72]

Kumar explains that while postmodernism "includes in its generous embrace all forms of change, cultural, political, and economic"[73], none of them is seen "as the privileged 'carrier' of the movement to post-modernity"[74]. The main reasons lie in postmodernism itself which sees eclecticism as the principal characteristic of today's world, and at the same time its own theoretical conceptualization is also eclectic.[75]

Thus, the concept of postmodernity is elusive. Among the clearest views of postmodernity is that of Lyotard.[76] In general terms Lyotard's theory is based on a view that the limits of the modern have been reached and the promise of modernity to promote "the emancipation of humanity from poverty, ignorance, prejudice, and the absence of enjoyment"[77] has failed. But he does define the postmodern condition crisply:

> the status of knowledge is altered as societies enter what is known as the postindustrial age and cultures enter in what is known as the postmodern age.[78]

However, he then proceeds to offer a conception of a new culture which involves a resistance and a critical deconstruction of traditional knowledge and construction of new knowledge. In this respect he suggests that we:

> carry forward the resistance that writing offers to established thought, to what has already been done, to what everyone thinks, to what is well known..., to everything which can change its form and make itself acceptable to opinion in general... The name most often given to this is postmodernism.[79]

He may be right. But the consequence - in terms of this thesis - is that his theory becomes unworkable for the further analysis of educatonal management information systems.

The third group of theories interpreting postindustrial social developments are the postfordist social concepts. If the theories of information society focus on the changing forces of production[80], and the theories of postmodernity deconstruct the modern and offer innovative ways of thinking about contemporary social reality on different levels, postfordism tends to emphasize the relations of production[81].

Postfordism is based on a perception that since the mid 1970s the world of production has been changing dramatically: productivity has declined, several mass product markets have collapsed, the costs for safety and environmental protection and energy have risen, international competition has increased[82], and the tertiary economic sector has overtaken the secondary (manufacturing) sector in many countries.

Postfordist interpretations analyze the new forms of production and work organization which, it is suggested, are replacing fordist manufacturing principles. However, postfordism does not concentrate only on relations in production, but extends its interpretations to the organization of the larger society, and to management principles.

Postfordist writers agree that the fordist era is over. The most comprehensive among postfordist theories (and also overlapping with

postmodern concepts) are the ideas of what Hall and Jacques[83] call the 'New Times' writers. For example, Lash and Urry[84] explain that postfordism is not just an economic phenomenon but also a process of cultural transformation of society. Similarly Hall writes that postfordism means broader social and cultural changes like:

> greater social fragmentation and pluralism, the weakening of older collective solidarities and block identities and emergence of new identities associated with greater work flexibility, the maximisation of individual choices through personal consumption.[85]

However, there are narrower interpretations. Campbell[86], for example, argues that all the different views of postfordism share the notion that the advanced capitalist societies have experienced "major changes in production work and, extending on from this, major changes in the regulation of labour and the general structure of the economy and the society."[87]

Watkins too, discusses different theoretical approaches to postfordism.[88] One strand for him is 'The Regulationists'[89], whose views are that postfordism means a worsening of several of the features of fordism because of its increasing work intensification and a greater, although more subtle, managerial control over the workforce[90]. In this respect Watkins points out that:

> Regulationists... see the new mode of regulation as very much the domination of managerial ideology which seeks new hegemonic ways, through such strategies as work teams, corporate culture and quality control, of infiltrating all sections of society, including education, in order to gain control over the workforce.[91]

Piore and Sabel[92] and the writers on the Japanese model of postfordism[93]

offer a more optimistic view. They claim that postfordist principles of flexible specialization of the workforce and their 'quality circle' organization help societies on their way to economic restructuring based on information technologies; and that workers feel less alienated than in more traditional work settings.[94]

Postindustrial society theories then provide a variety of interpretations of contemporary social developments. Three groups of postindustrial society theories were discussed in this part of the chapter: the information society theories which interpret social changes as a consequence of the information technology revolution; the postmodern theories which mainly construct their concepts on a critique of modern ways of thinking about societies and their cultures; and postfordism which places its social analysis in the world of work and its organization. The theories also overlap in many basic concepts.

Overall this thesis accepts the general thrust of the contemporary literature on changing social organization and the idea that a new postindustrial society is emerging. However, the thesis chooses the vocabulary of 'fordist' and 'postfordist' because it offers better opportunities for clear operationalization. This is especially important because the thesis is concerned with education, educational management, and EMIS. It remains now to have a look at the relation between education and educational management.

2.3 Interpretations of education

Until now this chapter has offered an analysis of different interpretations of the social developments in industrial and postindustrial society. This section is concerned with educational changes (in both types of societies) which contribute to the shaping of educational management.

There is considerable evidence that in the industrial societies of the nineteenth century mass school systems were established and that management of them became a major issue. In other words, mass educational systems are considered to be one of the major inventions of industrial society in which they play two major roles: providing a skilled workforce and being a major socializing force.[95] Thus, the topic of this thesis, the management of educational information systems, is closely related to the establishment of mass educational systems.

This section claims that some fundamental changes are occurring in the development of school systems in postindustrial society. The argument here is that mass education persists in the postindustrial world, but that its roles have been altered.

Until recently schools or similar institutions did not constitute a separate social system, but were rather part of other social systems like religion, production and commerce. It is only in the last two centuries that processes of differentiation in Western societies produced, from religion, politics and economics, a separate social system of education.[96] [97] With the development

of industrial production, then, the demand for an educated work force increased enormously and mass educational systems were established.[98] The state began to provide basic education to all children and later to select and train members of newly industrialized societies for different occupational positions.[99] Kumar argues that education was not confined merely to instruction, but it took over "a whole range of socialising, moralizing, and regulating tasks previously performed by the family, community, and... the Church."[100] Educational systems in this interpretation became a powerful tool of social control and political stability.[101]

The development of school systems is also for other writers[102] inextricably linked to the industrial order. But the two major roles educational systems in industrial society, as an ideological apparatus and in providing trained workers for the industry, have been changing with the development of postindustrial society.

Information society theorists who analyze education agree that new information and communication technologies have changed cultural, social, and economic conditions and that styles of knowledge acquisition have changed.[103] Different media and communication networks have opened up access to knowledge, especially to those who know what information to get, how to select and evaluate it and also how to analyze and synthesise it into new knowledge.[104] Some writers[105] emphasize that present educational systems are not adequately adapted to the new learning requirements and that a focus on developing higher cognitive processes and skills for new technology is needed which would enable each individual to find and

create their desired place in the changing environment. (Some of these arguments can also be identified in postmodern writings about education.)

The postfordist writers on education focus more on a changing relationship between the world of work and education. They explain that the social and economic developments of the postindustrial era have been challenging the role of education in the provision of manual labour for traditional occupations.[106] As the economy of information societies becomes increasingly based on abstract intellectual and 'flexible' working skills, education changes its curriculum, methods, and organization.[107] Brown and Lauder suggest that educational systems throughout this century can be considered 'bureaucratic'[108]. They argue that in postfordist times bureaucratized education is considered inappropriate, thus in countries like "Britain, the USA, Australia, and New Zealand there is evidence of a significant shift in educational policy towards 'free market' solutions"[109], making educational systems

> more responsive to market forces as a means of improving educational standards and maximizing the economic returns accruing from educational investments.[110]

At the same time Brown and Lauder argue that 'free market' educational reforms are not likely to contribute to sustainable economic growth and the achievement of social justice in the future.[111]

The notion that postfordist, information society, and postmodern analysts of education share is that the information and media revolutions cause a major transformation in education. They also agree that skills and content of learning in a new society change by becoming more abstract. What some

postmodern writers[112] about education further suggest is that the traditional organization of knowledge in school subjects and the methods of transmission no longer respond to individual needs and that the shift from 'learning specific knowledge' to ' learning how to learn' will occur in schools.[113] Postmodern analysts also suggest that the second traditional role of the educational system, the social integrative role, has been altered as well: it has been taken away from education by the mass media.[114] What precissely are the new roles of postindustrial education is still under negotiation.[115] The important conclusion for this thesis is that these new roles have consequences for educational management.

One of the specifics that came with the creation and separation of educational systems from other social structures was management. Like education which "is both an agent of change and in turn is changed by society"[116], the literature suggests that developments in educational management too are related to the wider social environment. Campbell et al. write that "Major movements in the field of educational administration, like those in education more generally, reflect deeper societal trends."[117] The next section explores this proposition.

2.4 Interpretations of management and the management of education

In this section the thesis argues that studies of management have been developing since the beginning of this century and that during this time the management of education has been influenced by the theories and practices

of general management, even when educational management started to become a distinct field of sudy some thirty years ago. In pursuing this argument this section firstly defines the term 'management of education', secondly it explores the influence that traditional management had on education, and thirdly the thesis analyses the evolution of educational management as a field of study.

Management in general is considered to be a process through which people organize their human and material resources to achieve certain tasks.[118] Educational management[119] is then a process of providing education to children, young people and adults by organizing those resources which are involved in the creation of the teaching and learning process.

Educational management is an area of academic study and practical development that is composed from elements of two large fields of study and practice: education; and management.[120] Both of them have been practised, and both of them were firmly established as fields of study before the rise of educational management concepts.[121] It is only in this century that educational systems and institutions have "become so large and complex as to make their administration a distinct area of practice and study."[122] Campbell et al. continue with the argument that "One cannot examine the evolution of educational administration without considering important milestones in the separate histories of education and administration."[123] The point at which the first theoretical works on organizations and their management sprang up and spread their influence to the management of education was the late nineteenth and beginning of

the twentieth century.

2.4.1 Traditional management principles and education

Early studies in organizational management have helped to shape the educational systems of industrial countries. From 1900 on, Campbell et al. point out that:

> the study and the practice of educational administration has been influenced by several major bodies of administrative thought originating outside of education. Generally, these approaches to management study, or ideologies of organizing, as they are sometimes termed, have been products of industrial and social science research into human behaviour in the workplace and elsewhere.[124]

Management theorists, like Taylor in USA and Fayol in France[125], believed that the factory is the most efficient example of an organization. With their empirical and theoretical work they influenced the social epoch in which schools, governmental bodies, and hospitals took over the principles of factory-style management, its hierarchical structures and its division of labour.

Taylor is recognized as the originator of the Scientific Management Movement.[126] Drawing from his management experience within the industrial environment, Taylor based his theoretical work on observation and measurement of working practices to establish the most efficient division of labour, incentive payment schemes and control of both workers

and managers.[127] Taylor believed that, by studying the steps in the working process, work performance could be improved. He considered that the best way to perform a certain job, the best tool to work with, and the optimal time to complete the job could be determined by scientific observation and measurement and thus the best division of labour could be developed and constantly controlled. That would mean, Taylor considered, that the organization of work could be established on scientific principles.[128]

Because of the dominance of business thinking and exposure of school managers to public criticism and pressure, school administrators, in the absence of any other writings, studied Taylor's methods and applied them to education.[129] In this respect Campbell et al. explain:

> The educational climate that welcomed Taylor's ideas after 1910 had been conditioned not only by social forces outside schools, but by other forces within education itself, most notably the emergence of a scientific movement in educational study during the first decade of the twentieth century.[130131]

Among those best known for enthusiastically adopting scientific management principles to education was Bobbitt:[132]

> whether the organization be for commerce or for manufacture, philanthropy or education, transportation or government, it is coming to appear that the fundamental tasks of management, direction and supervision are always the same.[133]

Bobbitt's views were based on efficiency, standards and hierarchy as primary goals of education.[134] In education, Bobbit's influence can be traced to the present day "in the concepts of aims and objectives, and the work of people like Ralph Tyler and Benjamin Bloom."[135]

Bobbit's works are only one example. The impact of scientific management on educational thought and practice can be observed throughout the last century.[136] The continuation of Taylor's concepts in more recent educational management developments is represented by corporate models of educational administration, statistical techniques, measurement scales, and the continuing struggle for efficiency.[137]

The contrasting group of theories that influenced educational management were those of the Human Relations Movement. This new approach in general management was developed mainly in the works of Mary Parker Folett, Elton Mayo and Chester I. Barnard in the last two decades before the Second World War.[138] The ideas of the Human Relations Movement introduced a new analytical perspective which had been neglected in early management theories. This new view would take into consideration human beings, their informal relations, their motivation and their behaviour.[139] This school of writers understood management as a means for developing spontaneous cooperation and informal organization, and as a way to avoid conflict and competition between individuals.[140]

Human Relations ideas were adopted by education in the 1940s partly under the influence of John Dewey in USA who was "One of the earliest promoters of democratic administration in education"[141]. Hughes et al. argue that the influence of the Human Relations Movement of the 1930s on education "was soon evident in books advocating democracy in educational administration."[142] More recently, the Human Relations approach has gained renewed attention in works, for example, by Newell[143] and Bush et al.[144]

Some criticisms of the Human Relations concepts consider that while the advocates of this strand focus on reducing interpersonal conflicts they tend to ignore the deepest sources of conflict: the differences between individual and organizational goals,[145] especially in bureaucracies.[146]

Soon after the publication of Weber's *The Theory of Social and Economic Organisation*[147] in English-language in 1947, studies of bureaucracy could be found in many works on administration;[148] and from the 1960s, the concepts of 'bureaucracy' and 'bureaucratic' were introduced into the educational management literature. Among those who have studied how Weber's model explains (or does not explain) organizations in general were Hall, Pugh and Hickson, and Mintzberg.[149] Their approaches were also adapted to school environments.

Hall's attempt to measure bureaucratization is considered one of the most systematic.[150] In the early sixties he developed six organizational characteristics of a bureaucratic structure.[151] These characteristics had been by the mid-1960s adapted and used by MacKay[152] in research on schools. Rational principles of organization were also studied by the Aston Team (D.S.Pugh and his associates[153]). Their approach was first developed for firms and stores.[154] However, during the seventies the Aston Team approach was adapted for the use in schools by many researchers[155] in the USA, England and Canada. By the 1970s, studies of bureaucracy can be also found in the works of Mintzberg[156]. The structural framework and the types of bureaucracy, which he developed and identified, were used in research on schools as well as other organizations.[157]

For the contemporary educational environment Hughes argues that:

> Schools and colleges, particularly if they are large, conform to a considerable degree to Weber's specification of bureaucracy, as judged by their division of work, their hierarchical structures, their rules and regulations, their impersonal procedures and their employment practices based on technical criteria.[158]

Osborne too argues that "bureaucratization is one of the most significant educational developments of the times."[159] [160]

The importance of the concept of bureaucracy, developed by Weber, is that different aspects of bureaucracy are present in almost every organizational research in education.[161] An extension of the bureaucratic/nonbureaucratic principles could be found under different names like: mechanistic/organic[162], or formal/nonformal[163], open/closed[164], or the five types of bureaucracy of Mintzberg[165].

Traditional management studies have therefore had a great impact on educational management. The analysis in this section has shown that the most important influences which affected education were: Taylor's principles of 'scientific management', the Human Relations principles of democratic administration, and Weber's concepts of rational, bureaucratic organization. The analysis has also shown how the inspiration which educational management received from traditional theories of management can be traced from the time they have been created to the present day.

The tradition of borrowing concepts from business and public management, as this chapter argues next, has continued even after the field of educational

management studies become separately established.

2.4.2 The 'New Movement' in educational management

Educational management studies expanded first in the USA and Canada in the 1950s. The scientific era in general management studies started with the publication of Herbert Simon's 'Administrative Behaviour' in 1945. Greenfield explains:

> Simon's conception of administration as decision-making and his dedication to the belief that the methods of positivistic science could be used to understand and improve the rationality of administrators' decisions have powerfully shaped the modern field of study... Simon's view of administration thus retained the assumptions of the economic model, but modified them to accommodate a less than perfect rationality.[166]

In educational administration Simon's "spirit of positivism"[167] came in the form of the 'New Movement'. In the mid 1950s Halpin, Campbell and Griffiths were among the first to require a more rigorous approach to the theory of educational management, based on the methodologies of the social sciences; theoretical research should, according to them, precede practical problems and not evolve from them.[168] The New Movement in educational management that "sought to provide coherence in educational management by emphasising the importance of theory"[169], gained worldwide recognition in the 1960s. A new paradigm, also called the behaviourist approach[170] in educational administration, contributed to intensive developments in educational management studies and three major areas will be discussed[171]: organizations as 'social systems', the Role Studies,

and the studies of 'organizational climate'.

The first area that largely influenced educational management was the Getzels-Guba model. Getzels and Guba, two social psychologists, developed in the 1957 a model of administration based on an analysis of a 'social system'.[172] For them social systems should be studied through two main interrelated dimensions: the organizational (or nomothetic) and the personal (or idiographic).[173] For them organizational structure should be analyzed in terms of the institution, internal division of roles and expectations for each specific role; while the analysis of the personal dimension should deal with the individuals, their actions and reactions.[174]

The Getzels-Guba model stimulated a large amount of educational management research work on conflicts between the personal and organizational dimensions.[175] Later the model was criticized for being far too simplistic.[176] Despite the criticisms, the model remains known for bringing closely together the theory and practice of educational administration.[177]

The next two areas of the 'New Movement' management studies that affected thinking about educational management were the 'Role Studies' and the 'Organizational Climate' studies. Both studies developed sophisticated methods of empirical research and generated enormous amounts of statistical data. Theory and research on role conflicts in general management are based on the presumption that social behaviour is significantly determined by the social environment.[178] The same idea has

been extended into the educational environment by Hoy and Miskel:

> Teachers and administrators face conflicts and pressures not only by virtue of their formal position but also because they occupy several roles in a number of social systems.[179]

The 'Organisational Climate' studies were introduced into thinking about educational management by Halpin and Croft[180] in the early 1960s "to capture the general feel or the atmosphere of schools."[181] Halpin and Croft developed sophisticated measuring instruments and statistical techniques.[182] The result of the research was a theory of six basic school climates, clustered from open to closed. The questionnaire which Halpin and Croft developed was later revised quite a few times and it is according to Hoy and Miskel[183] still a useful device in exploring general school climates of teacher-teacher and teacher-principal relations, but some criticisms have also been expressed.[184]

Within the New Movement paradigm, educational management has been established as a distinctive field of study. Different approaches, as outlined above, were developed within the general paradigm of human behaviour, and they have been a major inspiration for administration studies in education.

The New Movement was mainly characteristic of North American educational administration thinking. Another, much more pragmatic, approach to educational management studies has been developed in UK.

2.4.3 Management of education as an applied science

Development of educational management as a field of study in the UK began in the sixties.[185] Hughes et al. argue that in the UK:

> a cautiously pragmatic, multidisciplinary approach has characteristically been generally adopted. It is, incidentally, also an approach which is currently more widely favoured internationally, as the monodisciplinary aspirations of the North American New Movement appear less attainable.[186]

In the literature three factors that have defined the development of educational management thought in the UK are outlined: one, already mentioned, is the multidisciplinary orientation; the second is the expansion of practice oriented studies; and the third is the introduction and growth of educational management courses from the 1960s on.[187] The three factors have contributed to the wide variety of new theories and approaches in educational management in the UK and in many other countries.[188] For the purposes of this thesis one specific strand, which has become a dominant paradigm in educational management in the 1990s and which has implications for EMIS, will be discussed in this section.

From the late 1970s educational management is according to different writers[189] changing fundamentally. These changes are considered by some to be "a period of paradigm shift in... [the] field"[190]. This shift is mainly characterized, as this thesis suggested in the section analysing educational developments in general, by the introduction of a 'free market' philosophy in educational management. The reasons for these changes in management

of education are again related to the "larger developments in society, in the world economy, and in the social sciences."[191]

The reforms in education and educational management from the 1980s onwards in UK and USA, produced by the policy of the 'New Right', predominantly emphasize market forces and competition.[192] In the 1990s 'Total Quality Management' has become a leading paradigm in educational management.

The Total Quality Management (TQM) movement can first be observed in the business literature[193] and draws on "earlier management theories and concepts such as Management by Objectives and Organisation Development"[194]. TQM has been particularly inspired by the 'Quality Circles' of Japanese production[195]. In the 1950s Japan commenced to revolutionize its industrial production with the help of quality control experts from the United States, W.E.Deming and J.M.Juran.[196] Horwitz calls the shift a 'quality revolution'.[197]

Toyota is one example of this new style of production and quality control and Murray suggests that it could be compared with Ford's revolution earlier this century[198]. Toyoda, the founder of Toyota, saw that Taylor's principles did not work any longer and that the precious inventive power of the workers had been lost:

> Toyota, and the Japanese more generally... have developed a core of multi-skilled workers whose tasks include not only manufacture and maintenance, but the improvement of the products and processes under their control.[199]

With the new decentralization of work, day-to-day autonomy has been given to working groups; and the "teams linking departments horizontally have replaced the rigid verticality of Fordist bureaucracies."[200]

Japanese success in the world market inspired changes in management methods in other countries as well.[201] The new management started to emphasize better quality control in the productive process and 'listening to the customers', which are the two leading ideas of the Total Quality Management. Doidge and Whitchurch, in more detail, specify the main principles of TQM as: continuous improvement, a customer-oriented approach, commitment at all levels from top management down, a team orientation with good vertical and lateral communication, adaptation to changing circumstances, the development of arenas of excellence, building up rather than burning up resources, and the creation of a learning organization. [202]

The ideas of new quality based management spread to education too.[203] With the works for example of Handy and Aitken[204], and many others[205], education became suddenly focused on 'quality' and the 'customers'. The new 'School of Quality' argues Bostingl:

> must dedicate itself to meeting human needs by building relationships of mutual support with people inside and outside of the school. In TQM organization, everyone is both a customer and a supplier.[206]

TQM and other new 'free market oriented approaches' in educational management have deep economic and political roots related to the

processes of globalization[207]. Currently, in comparison to the late nineteenth and the early twentieth century, educational and consequently educational management patterns are not aimed only at the support of national economies. They are also playing an important part in defining the new international (or supranational) economic system where developed economies, as Cowen argues, strive for "the creation of, and control over, new forms of knowledge and information technology."[208]

2.5 Conclusion

The last two centuries have been characterized by a great many changes in societies and their educational systems world-wide. To locate and to name these changes, the chapter first focused on major interpretations of social reality within industrial and postindustrial societies; then the development of mass educational systems in the nineteenth century and some interpretations of contemporary educational developments were examined; finally, different approaches to general management and the process of formation of educational management concepts were analyzed.

The chapter analyzed the interpretations related to the rise and development of industrial and postindustrial society. The analysis has shown that the industrial revolution meant not only technical advancement but also wider changes in the society: in culture, education, science, and so on. Three of the most influential writers on industrial society, Marx, Durkheim, and Weber, offered important interpretations. The chapter

explained that although their ideas differ, the three thinkers also shared some common views of industrial society such as a marked increase in the division of labour and the differentiation of social life. This chapter demonstrated how these two social characteristics gradually increased in a number of organizations which stimulated theories of organizational analysis. Taylor's principles of scientific management and their adaptation in Ford's industries were discussed and their wider influence on a social life was presented through the concept of 'fordism'.

The chapter continued with the analysis of postindustrial society. It was argued that the principles which postindustrial societies are based on are disputed. Different interpretations were discussed: the information society theories, the theories of postmodernity, and the postfordist concepts. The three strands of thinking about postindustrial societies, as the chapter demonstrated, overlap in the sense that they all consider technological changes, especially computerization and the information (media) revolution, as being influenced by and influencing major social transformations. The three groups of interpretations have also been recognized as important potential sources for the theoretical exploration of the EMIS.

The chapter also discussed some interpretations of major educational system developments in industrial and postindustrial contexts. It was pointed out that mass education systems have emerged in industrial society as separate social systems; that their complexity expanded with the new roles they had in society; and that these roles have been contested in the postindustrial world; which all has effects on educational management.

The third part of the chapter was concerned with the analysis of educational management. It was shown how the traditional and more recent organizational and management theories encouraged and influenced the evolution of an educational management discipline.

The chapter indicated how early in this century Taylor's principles of 'scientific management', and Weber's studies of rational and bureaucratic organization have had a major impact on management theory and practice in schools. It was also pointed out that the same 'scientific' and rational principles, despite many other theoretical suggestions, still seem to be an important paradigm in today's education. In contrast to the process of rationalization of educational management under the influence of the traditional management paradigm, some attempts to adapt educational management more to individual needs were also identified and discussed. As an example the chapter showed how the Human Relations Movement had influenced educational management.

The chapter also showed that after the Second World War educational management has been striving to become a theoretical field on its own. Influences from other, previously established, disciplines like sociology, psychology, and above all the organization and management of the economy, have contributed to a variety of approaches which are monodisciplinary or multidisciplinary, or, as in the case of UK, more practice oriented. In the 1950s in USA and Canada the 'New Movement', based on behaviourist approaches was important, and the creation of the management of education as an applied science started in the 1960s in UK.

The field continued to change under the policies of 'New Right' governments and, again under dominant influences from the economy, countries like USA and UK are now characterized by new developments in educational management. The so called 'free market' approaches in the management of education that emphasize quality of 'educational products' and a 'customer oriented' educational service, the chapter argued, are currently the most influential educational management theories in postindustrial societies.

In these postindustrial societies, the style and the role of educational management information systems are also changing - which is the topic of the next chapter.

2.6 Notes

1. Giddens, A. Sociology: A brief but critical introduction. Second Edition. London: Macmillan Education, 1986.

2. ibid.

   The changes have been spreading at different speeds throughout Europe and around the world.

3. Giddens, op.cit, p.4.

4. For example: Giddens, op.cit.; Marx, K. Manifesto of the Communist Party. Moscow: Progress, 1977;

5. Giddens, op.cit.

6. Wrigley, for example, writes: "The industrial society is a convenient label to attach to the transformation which is principally economic in nature. But labelling falls short of coherent description... The term industrial revolution has come to carry connotations and to bear meanings that increasingly fail to 'save the phenomena'."(pp.2-3)

   Wrigley, E.A. Continuity, Chance and Change: The character of the industrial revolution in England. Cambridge: Cambridge University Press, 1988.

7. Marx, for example, in his works uses the term 'capitalist society'. This thesis' understanding of 'industrial society' is broader than 'capitalist society'; it is closer to Dahrendorf's interpretation, where industrial society is one in which industrialism is the prevalent form of economic organization and capitalism is only one form of industrial society.

   Dahrendorf, R. Class and Class Conflict in Industrial Society. Stanford: Stanford University Press, 1959.

8. Giddens (op.cit.), for example, considers industrialism, urbanism, and population explosion as the main changes which have dissolved traditional forms of society.

9. ibid.

10. Appelbaum, R.P. Theories of Social Change. Chicago: Markham, 1970.

11. Marx, K. The German Ideology. London: Lawrence and Wishart, 1974; Marx, 1977, op.cit.

12. Durkheim, E. The Division of Labor in Society. New York: The Free Press of Glencoe, 1964.

13. Durkheim (op.cit.) in his discussion on organic solidarity overlaps somewhat with Marx's interpretations of class conflicts by stating that organic solidarity, as normative rules which regulate social relations, cannot be achieved if these rules are imposed unilaterally by one class upon another.

14. Durkheim (op.cit.), for example, wrote: "the division of labour becomes the chief source of social solidarity... in higher societies".(p.401)

15. Weber, M. The Protestant Ethic and the Spirit of Capitalism. London: Unwin Paperbacks, 1985.

16. Appelbaum, op.cit., p.104.

17. Turner, B.S. (ed.) Theories of Modernity and Postmodernity. London: Sage Publications, 1993, p.7.

18. Weber, M. From Max Weber: Essays in Sociology. Gerth, H.H. and Wright Mills, C. (eds). London: Routledge and Kegan Paul, 1970.

19. Giddens, A. Capitalism and Modern Social Theory: An analysis of the writings of Marx, Durkheim, and Max Weber. Cambridge: Cambridge University Press, 1971, p.158.

20. Kumar gives the example of Britain; he also argues that "many developments associated with industrialization did not come to fruition until our present century."(p.144)

    Kumar, K. Prophecy and Progress: The Sociology of Industrial and Post-Industrial Society. London: Penguin Books, 1978.

21. Weber, 1970, op.cit.

22. In Weber, 1970, op.cit, p.51.

23. Weber, 1970, op.cit.; Kumar, op.cit.

24. Crozier, M. The Bureaucratic Phenomenon. London: Tavistock Publications, 1964, p.6.

25. Crozier, op.cit.

26. Turner, op.cit.

27. Murray, R. 'Fordism and Post-Fordism'. In Hall, S. and Jacques, M. (eds.) New Times. London: Lawrence and Wishart, 1990. Murray is explicit when he suggests that the fordist structures "are linked to a particular form of industrialism... in the late 19th century and [which] reached its most dynamic expression in the postwar boom." (p.41)

28. Piore, M.J and Sabel, C.F. The Second Industrial Divide: Possibilities for Prosperity. New York: Basic Books, 1984.

29. Murray, op.cit.

30. Murray, op.cit., pp.38-39.

31. Murray, op.cit.

32. Gramsci, A. 'Americanism and Fordism'. In Hoare, Q. and Howell-Smith, G. (eds.). Selections from the Prison Notebooks of Antonio Gramsci. London: Lawrence and Wishart, 1971.

33. The term is used by Gramsci himself (op.cit.); for example, see p. 316; he also uses terms like: 'new culture' or 'new way of life'.

34. Murray, op.cit., p.41.

35. Murray, op.cit.

36. ibid.

37. Giddens, 1986, op.cit.

38. ibid.

39. Bell, D. The Coming of Post-Industrial Society. New York: Basic Books, 1973.

40. Bell. op.cit., p.x.

41. ibid.

42. Bell, op.cit.

43. ibid.

44. ibid.

45. Giddens, 1986, op.cit.

46. Offe, C. Contradictions of the Welfare State. Cambridge, Mass: MIT Press, 1984.

47. Murray, op.cit.

48. Murray, op.cit., p.42.

49. Hall, S. and Jacques, M. (eds.) New Times. London: Lawrence and Wishart, 1990, p.11.

50. Watkins, P. 'The Fordist/post-Fordist debate: The educational implications'. In Kenway, J. (ed.) Economising Education: The Post-Fordist Directions. Geelong: Deakin University, 1994, p.31.

51. Erault, M. (ed.) Education and the Information Society. London: Cassell, 1991, pp.3-4.

52. Kumar, op.cit.

53. ibid.

54. Giddens, 1986, op.cit.

55. Bell, D. The Cultural Contradictions of Capitalism. London: Heinemann, 1979.

56. Bell, op.cit., p.xxx.

57. Drucker, P. The Age of Discontinuity. London: Heinemann, 1969.

58. Toffler, A. Future Shock. New York: Random House, 1970.

59. Giddens, 1986, op.cit., p.60.

60. Jameson, F. 'Foreword'. In Lyotard, J.F. The Postmodern Condition: A Report on Knowledge. Theory and History of Literature. Vol.10. Manchester: Manchester University Press, 1984, p.xx.

61. Kumar, op.cit.

62. Smart, B. 'Modernity, Postmodernity and the Present'. In Turner, B.S. (ed.) Theories of Modernity and Postmodernity. London: Sage Publications, 1993.

63. ibid.

64. Coulby, D. and Jones, C. Postmodernity and European Educational Systems: Cultural Diversity and Centralist Knowledge. Stoke-on-Trent: Trentham Books, 1995, p.3.

65. Coulby and Jones, op.cit., p.1.

66. Coulby and Jones, op.cit., p.5.

67. Smith, R. and Wexler, P. (eds.) After Postmodernism: Education, Politics and Identity. London: The Falmer Press, 1995, p.1.

68. Bauman, Z. Intimations of Postmodernity. London: Routledge, 1992.

69. Bauman, op.cit., pp.ix-x.

70. Lowe, R. Towards a New Agenda: What Does Postmodernism Mean for Historians of Education?. Unpublished lecture, given in Department of History of Education. Institute of Education, London, January, 1996, p.2.

71. Smart, op.cit., p. 28.

72. The quotation is from Usher, R. and Edwards, R. Postmodernism and Education. London: Routledge, 1994, p.7 and is quoted by Coulby and Jones, op.cit., p.5.

73. Kumar, op.cit., p.48.

74. ibid.

75. Kumar, op.cit.

76. Lyotard, J.F. 'Interview'. Theory, Culture and Society. Vol.5, No.2/3, 1988.

77. Lyotard, op.cit., p.302.

78. Lyotard, op.cit., p.3.

79. ibid.

80. Kumar, op.cit.

81. ibid.

82. Watkins, op.cit.

83. Hall and Jacques, op.cit.

84. Lash, S. and Urry, J. The End of Organized Capitalism. Cambridge: Polity Press, 1987.

85. Hall, S. 'The Meaning of New Times'. In Hall, S. and Jacques, M. (eds.) New Times. London: Lawrence and Wishart, 1990, p.119.

86. Campbell, I. 'The Australian Trade Union Movement and Post-fordism'. In Watkins, P. Knowledge and Control in the Flexible Workplace. Geelong: Deakin University: 1991.

87. Campbell, op.cit., p.131.

88. Watkins, op.cit.

89. Watkins (op.cit.) includes here Aglietta and Boyer.

    Aglietta, N. A Theory of Capitalist Regulation. London: New Left Books, 1976.

    Boyer, R. The Regulation School: A Critical Introduction. New York: Columbia University Press, 1990.

90. Watkins, op.cit.

91. Watkins, op.cit., p.12.

92. Piore, M. and Sabel, C. The Second Industrial Divide: Possibilities for Prosperity. New York: Basic Books, 1984.

93. Kenny, M. and Florida, R. 'Beyond Mass Production: Production and the labour process in Japan'. Politics and Society. Vol.16, No.1, 1988.

94. Watkins, op.cit.

95. Brown, P. and Lauder, H. (eds.) Education for Economic Survival: From Fordism to Post-Fordism?. London: Routledge, 1992.

96. Olivera, C.E. 'Comparative education: towards a basic theory'. Prospects, Vol.XVIII, No.2, Paris: UNESCO, 1988.

97. The most visible segments of an educational system are educational institutions. It is there that education is a central activity. Other institutions represent the support and the linkage structure for the educational system such as national and regional educational authorities. This thesis distinguishes between those institutions in the educational system where education is a central/major activity and those where it is not. The first will be considered as educational institutions or schools and the second will be called system level

institutions.

98. Green, A. Education and the State Formation: The Rise of Educational Systems in England, France and the USA. London: The Macmillan Fress, 1990

99. ibid.

100. Kumar, K. Prophecy and Progress: The Sociology of Industrial and Post-Industrial Society. London: Penguin Books, 1978, p.246.

101. Crozier (op.cit.), for instance, argues that since their creation mass educational systems have reflected each society's social system and at the same time represent the main force in perpetuating it.

102. For example: Bowles, S. and Gintis, H. Schooling in Capitalist America: Educational reform and the Contradictions of Economic Life. New York: Basic Books, 1976.

103. ibid.

104. ibid.

105. For example: Balle, F. 'The Information Society, Schools and the Media'; and Landsheere, G.D. 'The Information Society and Education'; both in Erault, op.cit.

106. Brown and Lauder, op.cit.

107. Erault, op.cit.

108. For Brown and Lauder (op.cit.) 'bureaucratic education' develops "because the educational system is an institutional expression of societal attitudes and power relations, its organization and development have been shaped by the more general process of bureaucratization, which has been the dominant form of social organization throughout this century."(p.11)

109. Brown and Lauder, op.cit., pp.23-24.

110. Brown and Lauder, op.cit., p.24.

111. Brown and Lauder (op.cit.) argue that 'free market' reforms are 'low-trust' and 'low-skill' solutions. From the predominantly in teachers' hands, the decisions about the pupils' educational future have now passed to parents. "Therefore when education is treated as a commodity the economic power of parents, or lack of it, becomes an increasingly important determinant of educational and life

chances."(p.26)

112. For example: Lyotard, op.cit; and Hinkson, J. Postmodernity: State and Education. Geelong: Deakin University, 1991.

113. These ideas can be also found in the works of Piaget and Illich. See, for example: Illich, I. Deschooling Society. Harmondsworth: Penguin Books, 1971; and Piaget, J. Sociological Studies. London: Routledge, 1995, pp. 14-15.

114. Hinkson, op.cit.

115. Erault, op.cit.

116. Fägerlind, I. and Saha, L.J. Education and National Development: A Comparative Perspective. Oxford: Pergamon Press, 1989, p. 225.

117. Campbell, R.F., Fleming, T., Newell, J.L. and Bennion, J.W. A History of Thought and Practice in Educational Administration. New York: Teachers College Press, 1987, p.6.

118. Welsh, T. 'The Politics of Valuing in Information System Construction'. In Chapman, D.W. and Mählck, L.O. (eds.) From Data to Action. Oxford: Pergamon, 1993, p.94.

119. In the literature two terms are in use: educational management and educational administration. The thesis uses Hodkinson's and Glatter's different interpretations to support a choice between these two terms. Hodgkinson explains that: "we mean by *administration* those aspects dealing with the formulation of purpose, the value-laden issues, and the human component of organizations. By *management* we mean those aspects which are more routine, definitive, programmatic, and succetible to quantitative methods."(pp.4-5)

The same author goes even further by suggesting that the administrators are pure philosophers and the managers are pure technologists. But at the same time he admits that in practice this distinction is obscured. In contrast, Glatter suggests that both terms, educational management and administration, are used in the literature, interchangeably and differentially. He argues that when the two terms are used differentially, educational administration is more related to policy-making, high level functions and educational management implies more day to day, routine decision making. The concern of this thesis is with both. For the purpose of this thesis both terms educational management and administration will carry the same meaning. This thesis will choose to use the term 'educational

management', and the term 'educational administration' will only be mentioned where the sources use it.

Hodgkinson, C. Towards a Philosophy of Administration. Oxford: Basil Blackwell, 1978.

Glatter, R. Management Development for the Education Profession. London: Harrap, 1972.

120. Campbell et al., op.cit.

121. ibid.

122. Campbell et al., op.cit., p.2.

123. ibid.

124. Campbell et al., op.cit., p.19.

125. Henri Fayol (1841-1925) was a French mining engineer and his most well known book is 'General and Industrial Management'. The book was first published in French in 1916. It was translated into English in 1949. Friederick Winslow Taylor (1856-1917) was an American. His major book 'Principles of Scientific Management', published in 1911, represents the first theoretical work on industrial organizations.

126. This role of Taylor is recognized in all the literature dealing with the history of management.

127. Pugh, D.S., Hickson, D.J. and Hinings, C.R. Writers on Organizations. Harmondsworth: Penguin Education, 1971.

128. Taylor, op.cit.

129. Campbell et al., op.cit.

130. Campbell et al., op.cit., p.28.

131. Campbell et al. (op.cit.) argue that Edward Thorndike and his numerous researches and monographs were the first introduction of quantitative methods of inquiry into education. His work has been a starting point for a new way to look at education - the era of testing and measuring had started.

132. Bottery, op.cit.

133. Quoted in Bottery, op.cit., p.28; originally from: Bobbitt, F. 'Some general principles of management applied to the problems of city

school systems'. In Parker, S.C. (ed.) The Supervision of City Schools. Twelfth Yearbook of the National Society for the Study of Education. Part 1. Bloomington, IL: Public School Publishing Company, 1913, p.8.

134. Bottery, op.cit.

135. Bottery, op.cit, p.26.

136. Hughes, M., Ribbins, P. and Thomas, H. (eds.) Managing Education. London: Cassell, 1987.

137. Campbell et al., op.cit.

138. Hughes et al., op.cit.

139. ibid.

140. ibid.

141. Campbell et al., op.cit., p.50.

142. Hughes et al., op.cit., p.9.

143. Newell, C.A. Human Behaviour in Educational Administration. Englewood Cliffs, NJ: Prentice-Hall, 1978.

144. Bush, T., Glatter, R., Goodley, J. and Riches, C. (eds.) Approaches to School Management. London: Harper and Row, 1980.

145. Hughes at al., op.cit.

146. Among the most influential of organizational studies are the concepts of authority and the ways in which authority is legitimized, introduced by Max Weber. Weber made a distinction between the three organizational types following from different forms of authority legitimation: charismatic, traditional, and rational-legal. The rational-legal, strongly linked with a bureaucratic organizational form, is for Weber the dominant organizational model in modern society and also the most efficient form of organization. Weber's works are, in comparison to Taylor's who concentrated his studies on industrial organizations, more universal as Weber tries to understand general principles of human organization in a range of public settings.

Weber, M. From Max Weber. Gerth, H.H. and Wright Mills, C. (eds.). London: Routledge and Kegan Paul, 1970.

147. Weber, M. The Theory of Social and Economic Organisation. Glencoe, IL: The Free Press, 1947.

148. Hughes et al., op.cit.

149. The authors are quoted in Hoy, W.K. and Miskel, C.G. Educational Administration. New York: McGraw-Hill, 1991.

150. Hoy and Miskel, op.cit.

151. Hoy and Miskel (op.cit., p.116) quote Hall's characteristics of a bureaucratic structure: (1) hierarchy of authority, (2) specialisation, (3) rules for incumbents, (4) procedure specifications, (5) impersonality, and (6) technical competence.

152. MacKay, D.A. 'An Empirical Study of Bureaucratic Dimensions and Their Relations to other Characteristics of School Organization'. Unpublished Ph.D. dissertation. University of Alberta, 1964.

153. See, for example: Pugh, D.S. and Hinkson, D.J. Organizational Structure in its Context: The Aston Programme I. London: Saxon House, 1976; and Pugh, D.S. and Hinings, C.R. Organisational Structure, Extensions and Republications: The Aston Programme II. London: Saxon House, 1976.

154. Hoy and Miskel, op.cit.

155. Hoy and Miskel (op.cit.), for example, argue that in the USA "John Newberry (1971) was first to demonstrate that, with some modification, the Aston approach could be used fruitfully to study postsecondary colleges"; and "Holdaway and his colleagues [1975] provided evidence that educational organizations may vary widely in bureaucratic structure"(p.121). Hoy and Miskel also show that Kelsey (1973) and Sackney (1976) adapted the Aston Team "inventory for use in public schools in England and Canada."(p.123)

156. For example: Mintzberg, H. The Nature of Managerial Work. New York: Harper and Row, 1973; and Mintzberg, H. The Structuring of Organizations. Englewood Cliffs, NJ: Prentice-Hall, 1979.

157. Hoy and Miskel, op.cit.

158. Hughes et al., op.cit., p.8.

159. Osborne, A. 'The nature of education management'. In Davies, B., Ellison, L., Osborne, A., and West-Burnham, J. Education Management for the 1990s. Essex: Longman, 1991, p.7.

160. Despite this general statement, Osborne (op.cit.) admits that the concept of 'bureaucracy', in its pure form, cannot be generally applicable to the interpretation of school management today.

161. Each of the five educational management models described by Bush (op.cit), for example, introduces one or another aspect of bureaucracy.

162. Burns, T. and Stalker, G.M. The Management of Innovation. London; Tavistock, 1961.

163. Hoy and Miskel, op.cit., p.128.

164. Hoy and Miskel, op.cit., p.410.

165. Mitzberg, 1979, op.cit.

166. Greenfield, T. 'The Decline and Fall of Science in Educational Administration'. In Greenfield, T. and Ribbins, P. Greenfield on Educational Administration: Towards a Human Science. London: Routledge, 1993, p.138.

167. Greenfield, op.cit., p.143.

168. Hughes et al., op.cit.

169. Hughes et al., op.cit., p.10.

170. As a consequence of the popularity of the general theory of human behaviour, 'New Movement' proponents tried to develop a theory of administrative behaviour in education as a sub-system of the general theory. For example see: Campbell, R.F. and Gregg, R.T. (eds.) Administrative Behavior in Education. New York: Harper, 1957.

171. Hughes et al., op.cit.

172. Getzels, J.W. and Guba, E.G. 'Social behavior and the administrative process'. School Review. No. 65, 1957.

173. ibid.

174. Hughes at al. (op.cit.) see the consideration of both the organizational characteristics and the individual dimension, in management theories, as an accommodation of the "two main strands in traditional management theory, the classical and the human relations."(p.13)

175. The social system model in analysing educational administration concepts is also used as a framework for the book of Hoy and Miskel (op.cit.).

176. Greenfield, T.B. 'Research in Educational Administration in the United States and Canada'. Educational Administration. Vol.8, No.1, 1979/80.

177. Hughes et al., op.cit.

178. ibid.

179. Hoy and Miskel, op.cit., p.49.

180. Halpin, A.W. and Croft, D.B. The Organizational Climate of Schools. Chicago: University of Chicago, 1963.

181. Hoy and Miskel, op.cit., p.220.

182. Halpin and Croft (op.cit.) are best known for the development of the sixty-four item set in the Organizational Climate Description Questionnaire (OCDQ) and the use of statistical factor analysis.

183. Hoy and Miskel, op.cit., p.233.

184. The 'organizational climate' studies have been criticized by Hughes et al. (op.cit.): "the shallow theoretical underpinning of organizational climate research... provides no insight as to how a particular organisational climate comes into existence or how a closed climate can be made more open... Because of its lack of clarity it has failed to generate powerful hypotheses and has done little to increase understanding."(p.16)

185. Hughes et al., op.cit.

186. Hughes et al., op.cit., p.19.

187. Hughes et al., op.cit.

188. An overview of the history and more recent developments in the field of educational management was offered by Bush in his book *Theories of Educational Management*. Bush classifies educational management theories into five major models (formal, democratic, political, subjective, and ambiguity) distinguished on the basis of four main criteria (institutional goals, organizational structures, links with the environment, and the style of leadership).

Bush, T. Theories of Educational Management. London: Harper and

Row, 1986.

189. The major shift in educational management thought and practice is recognized by Hughes et al., op.cit; by Greenfield, T. 'Re-forming and Re-valuing Educational Administration: Whence and When Cometh the Phoenix?'. Educational Management and Administration. Vol.19, No.4, 1991; and by Boyd, W.L. 'The Power of Paradigms: Reconceptualising Educational Policy and Management'. Educational Administration Quarterly. Vol.28, No.4, 1992.

190. Boyd, op.cit., p.505.

191. Boyd, op.cit., p.509.

192. ibid.

193. Herman, J.J. and Herman, J.L Education Quality Management: Effective schools through systemic change. Lancaster: Technomic, 1994.

194. Doidge, J. and Whitchurch, C. Total Quality Matters: TQM in a Higher Education Context. Good Practice Guides. Manchester: CUA, 1993, p.4.

195. Bostingl, J.J 'The Quality Revolution In Education'. Educational Leadership. November, 1992.

196. Barra, R. Putting Quality Circles to Work: A practical strategy for busting productivity and profits. New York: McGraw-Hill Book Company, 1989.

197. Horwitz, C. 'Total Quality Management: An Approach for Education?'. Educational Management and Administration. Vol.18, No.2, 1990.

198. Murray, op.cit.

199. Murray, op.cit., p.46.

200. ibid.

201. There is a boom in the literature on 'quality management' in most of the developed countries.

202. Doidge and Whitchurch, op.cit.

203. Horwitz, op.cit., p.55.

204. For example: Handy, C. and Aitken, R. Understanding Schools as Organizations. London: Penguin Books, 1990.

205. See for instance: Herman and Herman, op.cit.

206. Bostingl, J.J. Total Quality Management and the Transformation of Education. Paper for the Waseda International Symposium on Modernization and Educational Reform. Tokyo, 1993, p.4.

207. Waters, M. Globalization. London: Routledge, 1995.

208. Cowen, R. 'The State, Philosophies of the Market and the Management of Education Systems: Principles and Some Practices in Comparative Perspective'. UNESCO Conference, Beijing 1994; unpublished paper, Institute of Education, University of London, 1994, p.15.

Chapter 3: DEFINING EDUCATIONAL MANAGEMENT INFORMATION SYSTEMS

3.1 Introduction

This chapter has two main purposes: firstly, it will clarify a number of definitions; and then it will develop two ideal typical models of EMIS, one related to 'industrial society' and the other to 'postindustrial society'.

The problem associated with 'defining' things is that a great deal of abstract specification is required. This makes for rather dull reading in the first third of this chapter. Nevertheless clarity about concepts is necessary, not least because the concepts of 'information' and 'information system' have been introduced into the educational management literature only recently. Like management, educational information has existed since the establishment of formal education provision. But unlike the management of education, which became the focus of considerable theoretical concern in the last few decades, educational information systems have not been given much theoretical attention. So definitions are required.

Subsequently, the chapter will construct the argument that in every educational information system there are certain common elements; and that these elements can be identified. The second argument in this chapter is that the elements of an EMIS, located within industrial and postindustrial

societies, can be formed into two ideal typical models of educational management information systems, in this thesis called a 'fordist' and a 'postfordist' model. These are ideal types as described in the methodological part of Chapter One. These two ideal typical EMIS models are extractions from their larger management environment, and thus the chapter also analyzes the main principles of educational management in industrial and postindustrial societies (which will contribute to the analysis of EMIS). This part of the chapter therefore contextualizes the earlier definitions.

The chapter is divided into five parts. The first part clarifies the concept of information, explaining the distinctions and relations between information and knowledge, and between information and data. The second part analyses, on the basis of the existing (small) literature, different definitions and explanations of an 'information system' in general and attempts to define an EMIS. In the third part the chapter develops the structural framework of a hypothetical educational information system by suggesting four distinct groups of its elements: purposes, jobs, information categories, and management characteristics built into any EMIS, and discusses each of the proposed elements in more detail. The fourth part of the chapter contextualizes significant management principles observed in educational practice as well as in general management. In the final part, this chapter offers the models; the fordist and postfordist EMIS models are constructed around the criteria of their purposes, their tasks, their information categories, and their management principles.

3.2 Information: a definition

Information, knowledge and data are terms that are often used in the educational literature. The chapter identifies some meanings of the three terms offered in the literature; it specifically tries to clarify, for the purpose of this thesis, the term 'information'.

One of the problems in approaching the understanding of 'information' is that information has become an all-purpose word, a word to cover a variety of descriptive tasks[1]; another problem is that definitions of 'information'[2], like those of knowledge and data, vary from epistemology to epistemology[3].

For example, the earliest theoretical treatments of information, and the communication of information, can be found in the mathematical theory of information. According to Smith[4] it was Hartley who in 1928 first defined information as

> the successive selection of symbols or words,... and showed that a message of N symbols chosen from an alphabet or code of S symbols has S^N possibilities and that the 'quantity of information' H is most reasonably defined as the logarithm, that is, H = N log S...[5]

This theory by Smith is seen as the beginning of modern communication theory. The mathematical theory of information, also called communication theory[6], is purely quantitative and very abstract. It provides, in terms of probability and statistics, "a measure for how much information is to be associated with a given state of affairs and, in turn, a measure for how much of this information is transmitted to, and thus available at, other

points."[7] This communication theory could then be described as a theory of signal transmission or a formal statement of the quantitative relations of information passing through communication media and on which communication depends. Here, communication theory deals with the amounts of information transmitted and its sources, and not with the semantic content of information that comes in those amounts.

In contrast, 'semantic aspects' of information, the aspects that (mathematical) communication theory fails to capture, are studied by different human and social disciplines. Some of these disciplines, like studies of human communication by social psychologists, have transferred concepts from the mathematical theory of communication. Concepts like channels, networks, feedback, and equilibrium are today used in all social sciences.[8] In the social sciences, 'information' and its role has been defined and described in a wide variety of ways.

Social and human scientists[9], unlike mathematicians, see information as a phenomenon that cannot be studied in isolation. For them information is closely related to the process of learning and a concept of knowledge. In this sense Dretske points out that

> information is an artifact, a way of describing the significance *for some agent* of intrinsically meaningless events. We *invest* stimuli with meaning, and apart from such investment, they are informationally barren.[10]

Generation, transmission, and reception of information therefore do not require or presuppose unequivocal interpretive processes.[11] The interpretation of information is related to the meaning[12] individuals append

to it in a process of knowledge acquisition.[13] This point underpins the fieldwork later in the thesis.

Traditionally knowledge is defined as a form of justified true belief[14]. The 'message' which information carries, and individuals' interpretive capabilities, define what a person can learn from the information. Information is then a commodity capable of yielding knowledge. In this respect Stonier argues that

> Patterns of information can be worked up into a coherent body of 'knowledge'. Knowledge consists of an organized body of information, such information patterns forming the basis of insights and judgements.[15]

In his interpretation, information could be a synonym for knowledge when it is simply accepted and memorized; but information can only stimulate new knowledge through the higher cognitive processes, those of information appraisal and evaluation.[16]

In the literature and in every day use, information and data are often interchangeable terms. In this thesis information differs from data; information acquires new value against the data from which it has been transformed. This point is well presented by Stonier:

> 'Data' is series of disconnected facts and observations. These may be connected to 'information' by analysing, cross-referring, selecting, sorting, summarizing or in some other ways organizing the data. It takes work to convert data into information... Information... is data transformed into a meaningful guide for specific purposes.[17]

In this thesis educational information will be treated as having been

generated from data concerning education; and educational information is the prerequisite for the knowledge individuals acquire about the states and processes in educational system. The point is important for both the theorizing of the ideal typical models; and for the subsequent fieldwork.

For information to become accessible it is necessary to organize it. The ways in which educational information becomes organized and managed is discussed in the next section; and the point re-emerges in the fieldwork.

3.3 Elements of an educational information system

In the previous part it has been suggested that one possible characteristic of information is to generate knowledge. However, it was suggested that information can create new knowledge only if it is embodied in a social system of human interaction, in an information system.

The argument in this part of the chapter is that, in every educational information system, certain characteristics can be identified and that these can be organized into a clear set of EMIS elements. This part of the thesis also shows that the literature does not offer an unequivocal meaning of the term 'educational information system'. For this reason, and because the main argument of this thesis is that educational management information systems change with the change from industrial to postindustrial society, a tentative definition and structure of EMIS will be established. The main elements and characteristics of an educational information system discussed

in this chapter will provide a basis for the theoretical modelling later in this chapter.

3.3.1 Some problems and general definitions

There are some general problems related to information that information systems tend to solve. One of the most crucial is information saturation. Sharples, in his writing on Knowledge-Based Systems, explains that the enormous amounts of information which surround every individual are mainly the consequence of competition between 'information providers', who ignore each other's data.[18] Similarly Balle argues that "we are undoubtedly buried in information but we are terribly lacking in knowledge."[19] The literature then suggests that a lot of, perhaps even too much, information is produced, but it is not always available to those who might need it. Thus the problem of the organization of information is related to its distribution - a crucial point of investigation in the fieldwork.

Many of the reasons for the non-availability of information lie in inappropriate information organization and management. One example is that relevant specialist knowledge is distributed very unevenly and is mostly concentrated in specialized centres, such as universities, institutes, and departments of government.[20] The only way to ensure the spread of this knowledge to other specialists and especially to non-specialists is to provide information sources, build ways for information dissemination and establish the rules of information flow.[21] These are some of the most

important roles an information system has; and as indicated the distribution of information is important to the subsequent empirical investigation by fieldwork.

Knowledge about education and educational systems is growing quickly, nationally and internationally, and this knowledge represents an important source for educational development.[22] The literature from developed[23] and on developing[24] countries suggests an increasing interest in educational information systems from the 1980s on, and especially in the 1990s. Information Systems as concepts were introduced in education primarily to support educational decision-making at national and local levels.[25] In the last ten or so years EMIS has become more and more recognized as an essential tool for the successful management of educational institutions.[26] Educational management information systems are therefore being seen as a key factor in educational decision making at national and institutional levels.[27]

However, there still remains the problem of the definition of information systems and educational management information systems and their tasks. Good, for example, considers that an information system is a "network of all communication methods within an organization"; and

> a means of providing information for decision making, evaluation of results, and knowledge about an organization and its environment through the acquisition, transmission, processing, storage, manipulation, and conversion of data.[28]

For Cassidy, EMIS means:

> a data collection, storage, retrieval, and dissemination system which may be used to support administration, supervision, monitoring and control, planning, research, and policy analysis in the education sector.[29]

Davies and Ellison broadly work within this definition, but stress that an information system has to provide high quality information "to inform decision making at the various managerial levels."[30] The two authors suggest five stages of the management of a school information system (in the same source also called an information-gathering process): identification of management tasks and decisions that require information; identification and definition of the nature and type of information required; data collection; analysis and evaluation of data to be turned into 'useful information'; and communication of this information to relevant parties. Davies and Ellison explain that after the management task is defined, the identification of the information required should follow, and only then should data should be collected. At this stage decisions about individual responsibilities and time-scale should also be made. As a fourth stage, the authors suggest the evaluation and analysis of the data collected, in a way which would provide "useful information rather than a mass of unrelated facts and figures"[31]; and as a final stage the results should be "communicated effectively to all relevant parties in the organisation."[32]

In different sources[33] it has been also emphasized that an educational information system should respond to the needs of the people which it is intended to serve by providing relevant, timely, and reliable information.

An information system is good, Davies and Ellison suggest, when it provides "the right information... to the right people... at the right time... in the right way... to achieve clear objectives."[34]; and Chapman and Mählck explain that educational information systems are seen "as a means of providing decision-makers with more accurate, relevant, and timely information."[35]

In other words, some of the definitions and explanations in the literature show that the concept of EMIS is still under negotiation. The thesis notes that EMIS is a complex social phenomenon which exists in a more or less formal way in every educational system and in every educational institution, and that an EMIS links individuals or groups of people in information exchange. It is also noted that the purposes of an educational management information system are to support decision making, management, evaluation, and research in education; and that the more people are linked, the more relevant information is available, and the more information is used in decision making and elsewhere in education, the more efficient will be the EMIS. These points are important both for modelling an EMIS and, subsequently, for the fieldwork.

Overall and for the purpose of ideal-typical modelling, the thesis argues that every EMIS can be analyzed through four main groups of elements: the 'purposes' which an EMIS serves, the different 'tasks' which an EMIS is intended to perform, the 'categories of information' which are covered within an EMIS, and the 'management principles' built into an EMIS. These

elements are for easier reading first presented in the form of a table and then analyzed in the next part of the chapter, and become an integral part of the subsequent ideal-typical modelling.

Table 3.1: **MAIN ELEMENTS OF EMIS**

PURPOSES:

1. supporting decision making, administration, evaluation of results and research in education.
2. providing relevant, timely and reliable information about the functioning of educational system and its environment;

TASKS:

1. identification of information needs and outline of the objectives;
2. data collection;
3. analysis and transformation of data into information;
4. information storage;
5. information communication and dissemination.

CATEGORIES OF INFORMATION:

1. programmes and curriculum of different types and levels of education;
2. students, staff and institution records;
3. student achievement and criteria for achievement;
4. evaluation and other research in/related to education;
5. finance;
6. and legal issues.

MANAGEMENT PRINCIPLES:

1. centralized / decentralized;
2. formal/nonformal relationships;
3. vertical/horizontal information communication.

3.3.2 Purposes and tasks

The first group of EMIS elements discussed here are the purposes. This thesis notes that educational management information systems vary from country to country and they can also vary within one educational system[36]. Educational information systems vary because each EMIS focuses on only a fragment of educational complexity and because this focus changes in space and time. In this respect Welsh explains that Educational Information Structures show "what the organizations and institutions of society accept and endorse as relevant, what they will tolerate, pay attention to, and pursue in order to establish 'the good order' which will provide the desired benefits of investment in education."[37]

The focus of each EMIS then depends on what emphasis and what priorities have been given to the general purposes of EMIS in different environments and in changing times. This thesis argues, as it moves toward the models, that the purposes of EMIS, relevant for exploration in different social contexts, are mainly twofold: 'to support' and 'to provide'. What then can an EMIS support and provide?

Many EMIS have been established to support decision and policy making; but an EMIS can also support administration, evaluation of results, research, and other activities[38] in education. At the same time the purpose of EMIS is to provide reliable information, in appropriate formats, and in time to all who make decisions, evaluate and research, or do other activities in education. A 'good EMIS' is then - and in this way - contextual; a point

which will be explored in the fieldwork.

The literature, as indicated, suggests several stages and procedures in the development of an EMIS. In this thesis the term 'task' will be used to identify different tasks performed by an EMIS. The first task of any EMIS is to understand information needs and to state clear objectives of information collection. In this respect Davies and Ellison argue that

> Information gathering should not take place until a careful assessment has been made of the management tasks and decisions which require information. It is a fallacy to think that the more information an organisation has the better will be the decisions.[39]

This point is supported also by Cassidy when he states that sophisticated information storage and retrieval are not as essential for an effective educational information system as are "clear purpose, a sound conceptual framework and appropriately defined structures and data elements..."[40] He also points out that lack of clear objectives could result in having an educational information system with no users. So clarity of objectives and tasks which need to be performed is a crucial point for ideal-typical modelling. This point will also be explored in the fieldwork.

The methods and instruments for the evaluation of information needs of different users are one of the major gaps within the discussion of EMIS. One of the problems encountered in this respect is the definition of 'users'. There have been few attempts to define particular groups of people who would be interested in having certain educational information and thus to define in advance the kinds of information these groups are or will be seeking.

Among the attempts has been that of Psacharopoulos. However he takes only four groups of people as main decision makers in education: Ministers of Education and other high government officials, the technocratic government officials, the general public, and the employers; he also suggests the kinds of information which these four groups might need.[41] What he does not explain are the ways of assessing general public information requirements. Similarly, Ross and Postlethwaite distinguish four levels of decision making in education and thus levels of information needs.[42] Firstly, there are teachers and parents who need to get and share information about individual students; second are school principals who are more interested in information on classes, their school in general, and comparison with other schools; third are the state and provincial officials who require even broader information related to planning for larger areas; and fourthly are the national officials, who need information related to long term trends of educational development.[43] This interpretation too presupposes that information needs can be forecast. Both sources do not make clear who actually defines information needs and who collects and analyses information for all these groups. This point is important for the ideal-typical modelling and will also be explored in the fieldwork.

After the information needs assessment and clarification of EMIS objectives, in the construction of any EMIS, is the task of data collection. It is probably the best developed task of any educational information system. The most common mechanisms for data collection are national and international surveys; national examination systems or other performance monitoring procedures[44]; classroom and school observations, interviews and

questionnaires from research and evaluation[45]; and national educational statistics. But the choice of methods of data collection, as the discussion of ideal typical EMIS models will show, again depends on the specific social context.

Another EMIS task, identified by the thesis, is to process collected data and transform them into information. Transforming data to information means adapting the content and the format of information to individuals or groups of people who are going to use it. Here, the problem which arises most often is, according to some writers[46] concerned with scientific knowledge, its 'translation' into forms useful in every day human practice. In this respect Silver argues that:

> One reason that scientific theories are not often evoked in the quick of the moment is that they are only superficially understood. The language of the theories, the specialized meanings of the terms, and the particular dynamics explicated seem foreign and unrelated to one's everyday vocabulary and thought process.[47]

The use of scientific information in policy making on national level was studied by Caplan and his colleagues[48]. Some of the findings, even if they are not specially related to education, are relevant for the discussion here. Firstly, it was found that social scientists could help policy makers in providing relevant and useful information only when policy problems and difficulties are clearly stated. Secondly, the information processing style - Caplan distinguishes: clinical, academic or advocacy[49] - or the ways in which policy makers process the information, determine the amounts and kinds of knowledge used by them. And thirdly, the study also showed that

governmental officials are willing to accept those scientific findings which coincide with their beliefs and with what is politically feasible; but they reject social science information when it is counterintuitive to their beliefs.[50] The same study emphasized the existing gap between policy makers and social scientists as a result of the "differences in [their] values, language, reward system, and social and professional affiliations."[51] One of the suggestions that Caplan makes is that policy makers and scientific knowledge producers should be linked by those information specialists who are capable of "coupling scientific outputs to policy goals and objectives."[52] Caplan's study confirms that apart from stating clear objectives for information collection, information processing depends on individual styles and values.

The points that Silver and Caplan raise are useful in that they represent a possible anticipation of some of the problems that may be identified in the fieldwork exploration, later in this thesis.

Information storage is another task of EMIS identified for the purposes of ideal-typical modelling. Information storage relates to all the different sources of educational information. In the literature[53] two basic sources of educational information are suggested: published and unpublished. Published sources are considered to be: monographic studies, journals, statistical publications, newspapers, and information accessible through computer networks. Unpublished sources consist of different case-studies and mimeographed papers, preliminary results of ongoing research, and students', parents', teachers' and employers' opinions.

The last EMIS task, identified for modelling purposes, is communication and dissemination of information.[54] Different aspects of communication will be identified in the EMIS ideal typical models and explored in the fieldwork. The thesis splits the discussion on communication between two groups of EMIS elements. In the EMIS ideal typical models communication is treated on a general level as one of the EMIS tasks; and communication in terms of information flows and formal and nonformal relations will be discussed in terms of the management principles built into EMIS.

3.3.3 Categories of information collection and management principles of EMIS

The third group of EMIS elements proposed by this thesis are the categories of information collection. At the beginning of this chapter it was pointed out that information systems in education vary in content and organization. There are many factors that define the specific information collected in each EMIS. Six major EMIS categories of information collection are suggested for the purpose of the subsequent analysis:

1. information about programmes and curriculum of different types and levels of education;
2. students, staff and institution records;
3. information on student achievement and criteria for achievement;
4. information about evaluation and other research in, or related to education;
5. finance related information;

6. and information concerning legal issues.

This thesis considers that most of the routine information that any EMIS collects could be embraced in these six categories; these categories will thus become important attributes in EMIS modelling.

The last group of elements, suggested by the analysis of EMIS structures, are the management characteristics built into EMIS. EMIS, as their name suggests, are *managed*. The management of an educational information system involves specifying what information will be available and for whom.[55] In this thesis three management characteristics of EMIS are discussed. First, it is argued that management of an educational information system can extend from being highly centralized to being highly decentralized; secondly, management can vary from one where communication is mainly formal to a more informal pattern; and thirdly, information flows could be mainly vertical and one way, or they can be two way or in multiple directions. The characteristics will be examined here and will be incorporated in the ideal typical modelling and explored in the fieldwork.

Centralized educational information systems are by this thesis considered to be those EMIS where the majority of information processing and storage is concentrated in specialized institutions within national education systems. In these EMIS information technology[56] and expertise are considered to be primary factors in EMIS organization and management. In this sense centralized educational information systems are not

automatically undemocratic but do contribute, as Windham indicates, to "the 'informational distance' that exists between educational reality and the decision-maker."[57] In contrast Dennison and Shenton notice that information that flows through a system with lots of intermediary channels and communication loops tends to be modified and reinterpreted more often[58]. Thus in decentralized educational information systems, where information processing and storage are dispersed (e.g. geographically, or by EMIS information categories, or by an information user group orientation), 'informational distance' is diminished but can contribute to:

> the 'balkanization' of the educational system in a manner that may reduce the general protection of educational interests other than those of the local majority in each of the decentralized units."[59]

Clearly the organizational pattern varies in both kinds of system. In organizations where "authority is not delegated but concentrated in a single source... a few positions in the structure have most of the information obtaining ability"[60]; and in those educational institutions, districts, and systems with decentralized decision making "the information-obtaining potential is more or less spread evenly among all of the positions."[61] This theme will be incorporated into the ideal typical modelling and its implications explored in the fieldwork.

Apart from centralization and decentralization issues, two other management principles are discussed here. The literature[62] suggests that management of information can be formal and nonformal and that information flows can be vertical and horizontal. Formal communication

channels follow the hierarchical structure of the educational system or educational organization.[63] However, every educational information system has also developed some kind of nonformal communication. As Hoy and Miskel point out:

> Formal and informal communication channels exist in all educational organizations. Both the substance and direction of communication can make the two systems complementary.[64]

Similarly information flows vertically and horizontally.[65] Vertical information flows in organizations are divided into downwards and upwards flows between the (institutional) levels of the educational system hierarchy.[66] Horizontal communication flow means that information moves horizontally between members of the same hierarchical level in the educational system; and it can be formal or nonformal.[67] Both themes are incorporated in the ideal typical models and are reviewed in the fieldwork.

With these relatively abstract definitions and principles established, the thesis moves to the identification of some educational management characteristics typical of industrial and postindustrial social settings.

3.4 Reflections on educational management principles related to EMIS

One of the themes in the second chapter of this thesis was the development and adaptation of general management theories and practices to education. What has not yet been discussed is what are the main principles that distinguish management in industrial from postindustrial society and how

these principles can be observed in education.

This chapter introduces the concepts of industrial and postindustrial management through the identification of those management principles that are reflected in educational management and in EMIS ideal typical models, and calls them 'fordist' and 'postfordist' educational management principles.

The analysis of social developments early in this thesis showed that industrial societies are characterized by a complex division of labour; by mass production and consumption of standardized goods; by an increased differentiation of social life; by 'rationalization' as the main principle of organization in all spheres of social life, based on bureaucratic and hierarchical organizational principles, with the main aim being to assure predictability of social processes.

In the same part of the thesis it was also argued that postindustrial societies are characterized by diversity, differentiation, fragmentation and therefore by increasing pluralism of individual and social life; by technological inventions which shift employment from manufacturing to the service sector; by more flexible and flatter organizational structures; by growing managerial and professional structures; and by the collapse of predictability and by more rapid change and increasing uncertainty.

In education also, as discussed in Chapter Two, some major trends of these two social processes, industrial and postindustrial, can be identified.

Education in industrial societies became compulsory for all, it was organized on rational principles, and its two main roles were to socialize populations and to train workers for industries. Education in postindustrial societies on the other hand, as argued earlier, changes its roles; unfortunately in ways that are not yet fully clear.

The problem with the theories of education in postindustrial society is that they differ in their views about the new roles which education has or will develop in future. Watkins, for example, argues that in postfordist writings about education two contrasting groups of views exist.[68] One view sees education as performing an utilitarian function, servicing the demands of the economy, and importing the ideologies of the business world.[69] The second view suggests education should help students to develop higher degrees of skill and responsibility to cope critically with changes in working conditions and in society at large.[70] The same is true of much of the writing on management. While in the literature there is general agreement that principles of fordist management exist, there are different interpretations about what those principles are, especially in terms of decision making processes and control.

It is this confusion which this chapter tries to resolve by a specification of some of the fordist and postfordist management principles in education.

The introduction of fordist management principles, as discussed earlier, started with Taylor and Ford in the 1920s and 1930s but reached its peak after World War II.[71] As also argued earlier, educational systems tend to

borrow organizational and management practices from industry; the main principles of fordist educational management are those of a 'rational' organization.

Rational organizations, as described by Weber, are bureaucratic.[72] The literature[73] interprets bureaucratic management as being based on: high division of labour, highly vertical hierarchical structures, separation of manual and mental work, separation of management from execution, and formal relations between managers and workers which are regulated by sets of rules to make individual behaviour clear and predictable. Bureaucratic management assumes a predictability for all organizational processes. To assure predictability the management process is also divided into sets of procedures corresponding to each step in processes of decision making and implementation of policies[74] and centralized mechanisms to control processes are established[75].

Many of the fordist management principles identified above are discussed in educational management. With 'scientific management', the primary goal of educational systems became efficiency.[76] Educational systems and schools started developing into rational organizations[77] characterized by vertical hierarchical structures with the decision making power concentrated on the top of the hierarchy.[78] Within such an organization the goals and the policies of national education are defined at a governmental level.[79] Implementation is assured by the hierarchical structure and procedures of the educational system.[80] The detailed consequences for schools have been illustrated by Levin:

> The work process for teacher and student has been set out well in advance of the implementation of the schooling activity and without the involvement of the major participants. The design and planning of the curriculum, pedagogy... and methods of evaluation are usually set out by a political and administrative process with the help of the specialists...Each course is generally divided into units and subunits which are followed sequentially and often learned by rote to enable success on standardized tests of the units. Students have little control over the use of their time and little input into the learning process.[81]

Thus, there is a wide consensus in the literature about the main fordist principles of educational management. The reasons lie in the nature of fordism: its basic developmental model was, as Lipietz argues, 'hegemonic'[82]. The fordist, highly bureaucratic form of management that emphasized obedience, reliability, duty, and roles of superordination and subordination in both public and private sectors, has been superseded in many organizations by management principles which emphasize very different attributes.[83]

The interpretations of postfordist management changes are much more diverse. Handy, for instance, argues that changes in management "are different...: they are discontinuous and not part of the pattern"[84]. The new models that are emerging generally in management, as Scase suggests , are "established on principles and assumptions which are in sharp contrast to those underlying more bureaucratic forms."[85] For example, one of the foundations of rational organizations, the detailed division of labour, has been limited[86]; under Japanese influence different forms of teamwork have been introduced[87]; and a principle of 'flexible specialization' has been

claimed to be replacing fordist specialization[88].

The postfordist literature also declares that highly hierarchical structures with vertical linear forms of management have been slowly replaced by 'looser', 'open', and 'flexible' structures.[89] Predictable, reliable, and compliant forms of behaviour which were valued within bureaucratic management have been giving way to more creative conduct by employees.[90] Individual creativity and the capacity to cope with change and ambiguity are emphasized and flatter hierarchies, 'adhocracies', 'matrices', and 'simple structures', as Mintzberg[91] suggests, are becoming central to management structures. Related to the principle of hierarchy is also the principle of authority. If bureaucratic management was based on 'legal authority', today many writers observe a mixture of legal-bureaucratic and professional authority.[92] This trend, where administrators share management responsibilities with the professionals, has been typical for educational institutions.[93]

Another management principle changing in postfordist organizations is centralization in terms of control and decision making. However, postfordist interpretations of these changes in centralization differ. Some consider that tight managerial discipline and control have been retained[94]; others, that there has been greater democratization of society and the workplace[95]. At the same time it has been suggested that governmental control tends to grow stronger.[96] In education, also, there is similar ambiguity - but not necessarily contradiction in a postfordist world. As Cowen points out on a national level there is a tendency on the part of the

State to "simultaneously centralize and decentralize its control over educational services."[97] Thus:

> what we can normally see is a centralization of rule-making activity by the State... and the decentralization of responsibility for playing by the rules.[98]

At the institutional level, centralization of control and decision making is becoming more flexible as schools strive to be more open to change.[99] Although "bureaucratic forms of organization persist"[100], there is a tendency to replace traditional forms of 'autocratic' management by management based on those "leadership skills that encourage the sharing of problems and the discussion of possible solutions and strategies for achieving goals."[101] In this view decision making in many educational organizations is moving from the centre to other organizational points. Research shows that decentralization of decision making in schools enhances individual creativity and changes relations between the people involved.[102] Formal relationships within organizations and between organizations and their environment are becoming less formal; compromise, coordination, and consultation and 'high trust' relations are encouraged and managerial control, based on the traditional bureaucratic principle, has been underplayed.[103]

This part of the chapter has therefore identified several principles that distinguish fordist educational management from postfordist. It has been argued that the main principles of fordist educational management are: vertical hierarchical structures, centralized decision making and control mechanisms. This part of the chapter has also shown that the main

postfordist educational management principles become: the 'loosening' of hierarchical structures, individual creative contribution to educational management, professionals and administrators sharing their responsibilities, and more evenly distributed forms of educational decision making.

Management principles are, it is suggested, reflected in the management of educational information systems. The next part of the chapter suggests two ideal typical EMIS models for the discussion of the changes that happen in educational information systems when industrial societies change into postindustrial configurations.

3.5 Two ideal typical EMIS models

In this thesis, as the title suggests, the central interest is in educational change, and the focus of the thesis is the change of EMIS. Earlier in this chapter, educational management information systems have been defined as complex social phenomena which exist in every educational system and therefore in each educational institution, whose role is to link individuals or groups of people in a process of information exchange. A structure of an EMIS was also defined and it has been argued that any EMIS can be analyzed through four main groups of elements: through the purposes it serves, through the different tasks it performs, through the categories of information each EMIS collects, and through the management principles built into each EMIS.

In the following part, the thesis develops two ideal typical models of EMIS: two different and dichotomous ideal types which are called a fordist and a postfordist ideal typical EMIS model. Most of the suggested characteristics of the two models in this thesis are visible in the literature but they are, following Weber's theory of ideal types, exaggerated. The two EMIS models form the central theoretical framework for subsequent field work exploration.

Each of the suggested EMIS models follows the division of groups of elements as in the general EMIS structure. Therefore fordist and postfordist EMIS purposes, specific tasks and information categories within the fordist and postfordist EMIS context, and fordist and postfordist management principles are proposed.

3.5.1 Fordist versus Postfordist EMIS purposes

The literature on industrial society suggests that - by extension and exaggeration - in the fordist EMIS model, the main purposes of information systems are to support governmental educational policies. In contrast, the postindustrial society literature permits the proposition that, apart from decision making, other activities are supported in the postfordist EMIS model. The argument in Chapter Two, and partly in this chapter, was that in industrial societies mass educational systems are bureaucratic and hierarchical, with highly centralized decision making. In such a context it is suggested information systems show the same characteristics.[104] The

fordist EMIS model very much follows the formal hierarchical structure of the educational system.

The thesis suggests that the first purpose of the fordist EMIS model in such an organization is to provide relevant or appropriate information but this information is primarily intended to introduce and to control the implementation of centrally decided educational policies. Therefore, within the fordist EMIS model, governments establish information systems in education to 'send' policy information in the form of legislative acts, circulars, directives, etc. to every level of the educational system. On the other hand, through the same model, governments tend to demand information which clarifies whether their policies have been implemented. The evidence in the literature also shows that information in centralized and hierarchical systems supports processes of regulation and control, all this with the main intention to maintain, to reproduce, or to increase organization.[105]

It is suggested here that, in a fordist EMIS model, control is one of the central purposes of educational information systems. This purpose has been also suggested - in a very general way - in the literature. Kress, who is not writing on educational management information systems, nevertheless makes a relevant point when he argues that:

> processes of communication can have the effect of becoming devices of control, or means of instruction, or suppression... The point is that the processes of communication always take place in a specific social and cultural setting,... and the structures of power, of authority, as well as the structures of solidarity, exert their influence on the participants.[106]

In the fordist EMIS model implementation and control are taken as the central purposes of an educational information system, and thus this thesis treats the fordist EMIS as a means of exercising centralized decision-making power within the educational system. While in the literature there is a notion that in every educational system a certain degree of participation in decision making exists[107], in the fordist EMIS model participation is not developed. Information that formally flows through an information system is, within the fordist EMIS model, defined on a national level (e.g. by a ministry, or by a department) and eventually by local (regional) authorities.

In contrast, the purposes suggested, for the postfordist EMIS model, are based on a proposition that educational information systems develop in environments where different parts of the education system have gained more autonomy or where, for example, parents, students, teachers, and the community are participating in educational decision making. Thus, the first purpose built into a postfordist EMIS model is to link together those different parts to provide access to the information needed for educational decision making and management. Therefore, within a postfordist EMIS model, educational information systems do not follow the formal structure of the educational system but rather tend to gain an independent status in parts of their structure and operation. In a postfordist model, an EMIS services a number of 'users'.

The second purpose suggested for the fordist EMIS model was (and is) control over the implementation of centrally defined policies. Within the postfordist model the role of an EMIS, in terms of control, changes. The

argument here is that in a postfordist EMIS model the provision of information (which means control over policy implementation) is not abolished, but it is assumed that control has become less coercive and more flexible. It is not regulated exclusively by the system of 'punishments and rewards' but is constructed as monitoring and evaluation processes. In this respect 'performance oriented management' is often mentioned in the literature.[108] It is suggested that, within a postfordist EMIS model, monitoring processes replace centralized control.

In the literature monitoring and control are explained by Hoy and Miskel as processes:

> of overseeing the implementation of the plan of action in order to be sure that it is proceeding as scheduled. Information monitoring and reporting must be built into the action cycle of decision making to provide for continuous evaluation of actual events as compared to expectations.[109]

Unlike control within the fordist EMIS model, the monitoring process does not take place, as Morgan's vocabulary suggests, in 'mechanistic organizations', but rather in 'matrix and organic organizations'[110] where the feedback information is provided to all the parties involved in aspects of policy implementation. The rewards, incentives, and persuasion that are suggested for the postfordist EMIS model, are replacing the punishment modes of control proposed within the fordist EMIS model. Therefore, the second purpose of the postfordist EMIS model asserted here is that information systems in education are a means of monitoring educational policies and providing information about evaluation results.

There is the third purpose proposed for both EMIS models. The thesis identifes the third purpose within the EMIS fordist model as providing specific, mainly quantitative information about the 'efficiency' of education, while within the postfordist EMIS model, information on 'quality''[111] is emphasized. The shift in the use of terminology, from 'efficiency' (as suggested for fordist EMIS model) to 'quality', can already be found in the literature. 'Quality' is becoming a popular term, for example, in the projects and publications of OECD[112] and UNESCO, and in the Total Quality Management studies in UK and USA[113].[114]

The purposes of the ideal typical EMIS models' can only be realized through the different tasks that are developed in information systems. The next part of the chapter analyses these 'tasks' and combines the discussion with suggestions about the third group of EMIS elements: the information collection categories.

3.5.2 Tasks and information categories within fordist and postfordist EMIS models

Earlier this thesis argued that in every educational information system different sorts of tasks and several information categories can be distinguished. Within the fordist and postfordist ideal typical EMIS models, this part of the chapter suggests, there are some important differences in tasks and categories of information collection, which include: analysis of data and its transformation to information, storage of information, and

information dissemination.

The first EMIS task, identified for an educational information system, is to evaluate information needs and then to set EMIS objectives. In centralized and highly administered educational systems, in which a fordist EMIS model is typical, the needs and objectives of an EMIS are largely determined by the state and the top levels of the educational administration. In this model, the type and quantity of data collection, methods of analysis, and forms of information dissemination are defined by policy makers.

The decision making background of the postfordist EMIS is more complex than the fordist one, because different groups and organizations participate. The management of education in an such environment very much follows, as Bush[115] suggests, 'ambiguity models' which:

> include all those approaches which stress uncertainty and unpredictability in organization. The emphasis is on the instability and complexity of institutional life... Decision-making occurs within formal and informal settings where participation is fluid.[116]

Thus, in the postfordist EMIS model objectives, types and quantity of educational information within such settings are defined not just from the centre, but also by different groups of people from different decision making points of educational system[117]. Because of the constant educational change and fluid participation in educational management, educational information systems are, within the postfordist EMIS model, constantly evaluated and reformed.

The next EMIS task proposed in the general EMIS structure was information collection. As the industrial type of mass education requires efficient, rational organization where efficiency is expressed in quantitative terms[118], information collection in the fordist EMIS model is also quantitative, concerned with so called 'inputs' and 'outputs' of educational system. The literature shows that, from the 1950s, a whole new range of statistical indicators were invented and sophisticated statistical methods were used in the production of educational indicators nationally, and internationally[119].

In the postfordist EMIS model, qualitative aspects of educational processes surface. Therefore, the information collection of quantitative information is less emphasized; more important in this model is qualitative information, based on continuing research and evaluation of educational and management processes.

The literature shows that already many authors claim that both qualitative and quantitative information within educational management are important. Bhola, for example, points out that both 'evaluative' and 'descriptive' data for effective decision making within human organizations are necessary[120]; and Carley warns that "it may be illogical to believe that quantifiable information is any more relevant to decision making than unquantifiable information."[121]

One of the problems often discussed in relation to information is its validity, reliability and comparability. Data analysis and transformation of

data to information, as shown earlier, is the next EMIS task that tries to satisfy these criteria. In the fordist EMIS model it is proposed that sophisticated measurement (statistical) methods have been developed to assure the highest validity, reliability and to ease the comparison of information.

The thesis suggests that within the postfordist EMIS model this task is organized differently. Data analysis goes beyond statistical indicators and introduces qualitative methods of analysis. Porter, for example, writes:

> Observations, interviews, teacher logs, and questionnaires are the primary measurement strategies for school process indicators.... Because indicators are statistics that can be easily aggregated to a state or national level ethnographic observations are not well suited to the indicator measurement problem."[122].

To support validity, reliability and comparability of educational information and to deepen understanding of the processes of educational systems it is proposed that the postfordist EMIS model relies on both statistical and qualitative information; and that this information is not generated only within the educational system administration but comes also from independent research.

Within a fordist EMIS model regular reports are the main sources of data collection. It is suggested for this model that daily, monthly, yearly, and other types of performance reports are produced; that their formats are standardised; and that they are always done for the higher levels of educational hierarchy. The thesis also supposes that, in the fordist EMIS

model, detailed data collection and reporting procedures on a regional and national level involve a lot of paper work and human energy. Because of such a detailed approach, the assumption of the fordist EMIS model is that centrally (nationally, regionally) produced information is the most reliable information; and that non-standardized information, and the information that has not been approved by the educational authorities, is difficult or even impossible to obtain.

In the postfordist EMIS model reporting is different. The suggestion of the thesis here is that instead of large numbers of formal regular reports less formal, ad-hoc reports are being prepared. In postindustrial societies, then, the information available throughout the educational system is less standardized as it responds to a wide variety of informational needs. Apart from the centrally produced information which, as proposed, prevails in fordist EMIS, other sources of educational information become available within postfordist EMIS, from an increasing variety of educational publications and computer networks. Both are also easily accessible. Thus, information storage and dissemination become, in the postfordist EMIS model and postindustrial social settings, rich and diverse.

The next group of EMIS model's elements are the categories of information collection. As indicated, the thesis suggests that in the fordist EMIS model collection of statistical information about students, staff, buildings, and equipment, on finance and the information about legislative matters, is prioritized. On the other hand, in the postfordist EMIS model, categories of information collection that cover curriculum; achievement; evaluation and

research are becoming more and more important. Therefore, it is proposed that in this model more information from those categories is collected and made available to the public in postindustrial societies.[123]

Up to this point three groups of elements have been discussed in the construction of the two ideal typical EMIS models. The last group, the management principles built into EMIS, will be presented next.

3.5.3 Management principles in the two EMIS models

The suggestion here is that there are at least three management characteristics, built into EMIS, that distinguish a fordist EMIS model from a postfordist: first is the centralization and decentralization of EMIS; second is the nature of the communication processes that change from one model to the other; and the third principle is related to the varieties of the formal and nonformal relations between people involved in EMIS.

In the earlier elaboration of the traditional rational organization with the pyramidal hierarchical structure it was indicated that decision making is limited to a relatively small group of people, usually on the top of the hierarchy. This thesis suggests that there is a direct connection between information management and centralized decision making and that, in the fordist EMIS model, information management is centralized in order to preserve (or increase) the power of a small group of decision makers.

The literature, in this respect, also notes that distribution of power in organizations depends very much on control of information. Mintzberg writes that having control over certain organizational elements, that are important for the functioning of organization and over elements that can only be supplied by a few individuals, is an important source of power.[124] The author suggests that control over resources, technical skills, and the corpus of the knowledge are these important elements.[125]

This thesis proposes that educational information systems in the postfordist EMIS model are decentralized. The thesis concluded earlier that educational management developments in postindustrial society require a change in the distribution of decision making in the educational system. In this process educational information systems change as well.[126] In the postfordist EMIS model, which thrive in different kinds of decentralized educational environments, information systems become decentralized and a number of different EMIS develop within the educational system, at institutional, local, and national levels.

The important characteristic of a decentralized EMIS in the fordist model is that responsibilities for performing information system functions lie within different layers and institutions or even outside of the educational system. Thus, all these 'informational points' have to be coordinated in such a way to avoid duplication of EMIS tasks and to increase communication.

The second management principle of EMIS discussed in the two ideal typical models is information flow. Related to it is the third management

principle - formal and nonformal relations between people in EMIS.

Communication in social groups, as the chapter analyzed earlier, is one of the most complex and at the same time increasingly challenging phenomena to research. The literature mentions different challenges. Kress, for example, writes about the relation between social structures and information flows:

> Not all the members of a society have access to all meanings, rather meanings are distributed, available and accessible along the lines of the potent structuring principles of a society: class, gender, age, ethnicity, profession... From a particular social situation and from the power differences in play in that situation we can make relatively reliable predictions about the direction the flow of communication will take.[127]

Within educational systems and within each educational institution constant communication takes place. Earlier discussion showed that theoretically a line can be drawn between communication that flows vertically and is mainly based on formal relations, and communication that is multilateral and relies on both formal and informal relations between people concerned with educational management.

Within the fordist EMIS model, which is typical for industrial society settings, relations are formal and communication is vertical. In the literature this aspect of information system is explained by Scase:

> communication procedures were required to be vertically structured so that those vested with senior managerial authority could monitor and control the flow of information and determine the effective allocation of resources within the organization.[128]

The two management principles change, the thesis suggests, with the shift from the fordist to the postfordist EMIS model. If in the fordist ideal typical EMIS model formal relations and vertical communication are predominant (if not the only principles of communication), in the postfordist EMIS communication within educational system is multilateral and based on a combination of formal and informal relations between people.

In the postfordist EMIS model, this thesis suggests, channels of communication are deliberately encouraged to be 'open', 'flexible', and 'informal' rather than, as in bureaucratic structures, follow strictly prescribed hierarchical roles[129]; and informal and intensive patterns of consultation, coordination, and communication between different administrative layers, institutions, and other groups of interested people are encouraged. The flows of information are multilateral: vertical and horizontal. The structure of the postfordist EMIS model, this thesis also suggests, is a result of a negotiation process between all parties involved in education; and the clear cut distinction between formal and informal relations within the postfordist EMIS is disappearing.[130]

The analysis of the two ideal typical models and the propositions they offer represent the most important part of the discussion in this chapter. The two models are the central theoretical strand of the thesis and are the basis for the subsequent fieldwork exploration. The main features of the two models are illustrated in the next table:

Table 3.2: Two ideal typical models of Educational Management Information Systems

	FORDIST EMIS	POSTFORDIST EMIS
PURPOSES	a means to implement educational policies	eases access to and communication of information between different parts of the educational system
	providing relevant information to control policy implementation	a means to monitor educational policies
	supports efficiency by providing a certain type of indicators	contributes to efficiency through quality assessment
TASKS	information needs and objectives defined on the top	information needs and EMIS objectives are defined by 'users' and are in constant state of evolution
	data collection based on regular reports prepared always for higher levels of the hierarchy; mainly quantitative data; no feedback	quantitative data are supported by qualitative (descriptive, evaluative); ad-hoc reports for different needs
	analysis of data and transformation to information based on sophisticated statistical-mathematical calculation methods	qualitative methods of investigation (research based)
	storage of information is central; sources are governmental	storage at central, local, and institutional levels
	dissemination is done mostly through centrally produced publications; free access to information is impossible	communication is rich, access to information is only partly limited, dissemination through computer networks
INFORMATION CATEGORIES	statistical information on students, staff, buildings, equipment, legislation, and some financial information are prioritized	curriculum, achievement, research/evaluation and financial information are becoming more and more important
MANAGEMENT PRINCIPLES	the whole system is centralized	decentralized (locally, at institutions)
	vertical, one way information flow (top-down or down-upwards)	multiple information flows (vertical, horizontal)
	formal relationships	formal+nonformal relationship

3.6 Conclusion

This chapter had two major tasks: to define an EMIS, and to develop two ideal typical models of EMIS.

The chapter started with the analysis of explanations and definitions of information systems in general; then different theoretical views on the role of information system in education were explored. Noting that none of the existing theories offers a comprehensive approach to the analysis of EMIS, this thesis proposed a definition of EMIS based on four main groups of elements.

The first group of EMIS elements were its purposes. In practice educational management information systems can be quite explicit and clearly defined or they can be hidden within educational system structures and educational organizations. In theory every EMIS has certain purposes. In this chapter two main EMIS purposes were suggested.

The second group of EMIS elements were its tasks. The chapter pointed out that educational information systems perform different tasks like stating information needs and clear objectives of EMIS before data collection, another EMIS task. Transforming the data to information is also an EMIS task. The major problem, related to this task, was recognized in the 'translation' of theoretical research findings to the language, needs and expectations of different EMIS 'users'. Information communication, another EMIS task, brought into the discussion the whole range of the theories

related to human communication and each of them carries a set of perspectives about what is important and how it should be treated.

The third group of elements of an EMIS discussed in the chapter were information categories. In order to systemize the collection of information six major categories of EMIS collection were suggested.

The chapter continued with the discussion of the management principles of an educational information system as the fourth group of EMIS elements. The formal and nonformal, and vertical and horizontal communication flows were discussed, and the principles of centralized and decentralised educational information system management were explained.

In continuation, the chapter discussed how the ways in which education is managed influence the operation of EMIS. It was shown how some educational management principles change with the change from industrial to postindustrial educational settings. The shift from highly hierarchial to more open management structures was noted; then the shift from centralized to decentralized forms of management was identified; and the changing decision making styles were presented.

After introducing some of the 'fordist' and 'postfordist' educational management principles, the thesis moved to the construction of its central theoretical framework - the two ideal typical models of educational management information systems. The chapter emphasized that 'fordist' EMIS model is typical of industrial society, while the 'postfordist' EMIS

is characteristic of postindustrial social developments.

The two ideal typical EMIS models were built on a general EMIS structure, proposed earlier in this chapter. Therefore, within the two models different purposes, tasks, information categories, and management characteristics were suggested. In the 'fordist' EMIS model it was noted that the main purposes are implementing the educational policies, controlling the processes of implementation, and the orientation towards efficiency (in terms of quantity) indicators. On the other hand, the main purposes as suggested in the 'postfordist' EMIS model are making easier access to educational information for all parts of educational system, monitoring of educational developments, and emphasized quality assessment.

It was proposed that in the fordist EMIS model educational information systems are centrally managed, therefore the EMIS tasks are defined by superordinate, usually national, educational authorities. As a consequence, it was suggested, data collection is mainly based on regular reports and statistical forms; most of the information is stored by central government and is disseminated by the educational authorities; and the access to the information is limited. The chapter then proposed that within the 'postfordist' model, EMIS tasks differ from the 'fordist' in the sense that decisions about what data should be collected and how should this data be analyzed and communicated are divided between different 'actors' involved in education. It was suggested that ad-hoc reports and qualitative forms of information are introduced in information collection; that the numbers of information sources increase; and that access to information is no longer

limited. For this, computer networks and other technology were recognized as very valuable.

The next propositions, discussed in the models, were information collection categories. Within the 'fordist' EMIS model, as already indicated, statistical information was considered to be a priority, therefore the information on students, staff, buildings, and certain aspects of finance are central categories. Also very important is information about educational legislation. In contrast, the thesis suggested that, in the 'postfordist' model the collection of the descriptive information, like curriculum issues, research findings, students progress monitoring forms, is becoming of greater interest.

Finally, the management characteristics of the two ideal typical models were discussed. Three typical characteristics were noticed within the 'fordist' EMIS model: centralization, vertical and one way information flows, and high formalization of the relations between people. On the other hand the 'postfordist' EMIS model was characterized as decentralized, with multiple information flows, and the encouragement of nonformal relationships.

The two ideal typical EMIS models, as proposed by this thesis, represent the basis for the empirical exploration in Slovenia and England. Chapters Four and Five explore EMIS in the two countries.

3.7 Notes

1. Dretske, F.I Knowledge and the Flow of Information. Oxford: Blackwell, 1981.

2. Dictionaries and the encyclopedia offer very broad interpretations of information. In *The New Encyclopedia Britannica,* for example, information is a message "occurring in any of the standard communications media, such as telegraphy, radio and television, the signals involved in electronic computers...". The *Dictionary of Education* interprets information as a "knowledge about anything expressed in a symbolic form" and educational information as "valid and usable data about all types of present and probable future educational or training opportunities and requirements."(p.300)

   The New Encyclopedia Britannica: The Knowledge in Depth. Fifteenth Edition. University of Chicago, 1986.

   Good, C.V. Dictionary of Education. McGraw-Hill, 1973.

3. Maruyama states that "epistemological structures vary from individual to individual, from group to group, and from culture to culture."(p.28).

   Maruyama, M. 'Information and Communication in Poly-Epistemological Systems'. In Woodward, K. (ed.) Myths of Information: Technology and Postindustrial Culture. London and Henley: Routledge and Kegan Paul, 1980.

4. Smith, A.G. (ed.) Communication and Culture. New York: Holt, Rinehart and Winston, 1966.

5. Smith, op.cit., p.38.

6. Bordenave explains that the first studies in communication started with the invention of electronic media therefore "the first formal model of the communication process originated with electrical engineers and mathematicians."(p.12).

   Bordenave, J.E.D. Communication and Rural Development. Paris: UNESCO, 1977.

7. Dretske, op.cit., p.3.

8. Bordenave, op.cit.

9. See for example: Landsheere, G.D. 'The Information Society and Education'. In Erault, M. (ed.) Education and the Information Society. Council of Europe and Cassell, 1991; and Dretske, op.cit.

10. Dretske, op.cit., p.vii.

11. Dretske, op.cit.

12. Smith (op.cit.) understands meaning as "a product of coding", and coding as "a form of behaviour that is learned and shared by the members of a communicating group..."(p.6).

13. Landsheere, op.cit.

14. Dretske (op.cit.) considers that this traditional understanding of knowledge has some opponents who claim that beliefs can be false, the truth may not be believed, and the concept of justification "is left unanalyzed".(p.85)

    For sociology of knowledge, claims Znaniecki, the 'truth' is understood as "any element of any system of knowledge taken with its humanistic coefficient, that is, taken from the standpoint of the men who believe that they understand this system, who are actively interested in it and regard it as a containing objectively valid knowledge about the object matter to which it refers."(p.7)

    Znaniecki, F. The Social Role of the Man of Knowledge. New York: Octagon Press, 1965.

15. Stonier, T. The Wealth of Information: a Profile of the Post-industrial Economy. London: Methuen, 1983, p.19.

16. Landsheere, op.cit.

17. Stonier, op.cit, p.19.

18. Sharples, M. 'Controlling the Application of Knowledge-Based Systems'. In Görazon, B. and Florin, M. (eds.) Skill and Education. London: Springer-Verlag, 1992.

19. Balle, F. 'The Information Society, Schools and the Media'. In Erault, M. (ed.) Education and the Information Society. Cassell and Council of Europe, 1991, p.88.

20. Sharples, op.cit.

21. ibid.

22. Windham, for example, quotes Lourié who "notes that educational decision making is being determined by financial constraints, availability of information, and the quality of information."(p.29)

    Windham, D.M. 'Strategies for decentralizing data use'. In Chapman, D.W. and Mählck, L.O. (eds.) From Data to Action: Information Systems in Educational Planning. Paris: UNESCO, International Institute for Educational Planning, and Oxford: Pergamon Press, 1993.

    Lourié, S. 'Does education need strategic planning?'. Prospects. Vol.19, No.2, 1989.

23. For example: Psacharopoulos, G. (ed.) Information: An Essential Factor in Educational Planning and Policy. Paris, UNESCO, 1980.

24. For example: World Bank Education in Sub-Saharan Africa: Policies for adjustment, revitalization, and expansion. Washington, DC: World Bank, 1988.

25. Chapman, D.W. and Mählck, L.O. (eds.) From Data to Action: Information Systems in Educational Planning. Paris: UNESCO, International Institute for Educational Planning, and Oxford: Pergamon Press, 1993.

26. The vast amount of literature written on educational management recognizes and explains the vital role of EMIS.

27. Chapman and Mählck, op.cit.

28. Good, op.cit., p.301.

29. Cassidy, op.cit., p.4.

30. Davies, B. and Ellison, L. 'Management information'. In Davies, B., Ellison, L., Osborne, A., and West-Burnham, J. Education Management for the 1990s. Essex: Longman, 1991, p.22.

31. Davies and Ellison, op.cit., p.24.

32. ibid.

33. Davies and Ellison, op.cit.; Chapman and Mählck, op.cit.

34. Davies and Ellison, op.cit., p.23.

35. Chapman and Mählck, op.cit., p.1.

36. Decentralized organization of EMIS, as explained further on, could also mean more and different information systems within one educational system.

37. Welsh, T. 'The Politics of Valuing in Information System Construction'. In Chapman, D.W. and Mählck, L.O. (eds.) From Data to Action: Information Systems in Educational Planning. Paris: UNESCO, International Institute for Educational Planning; and Oxford: Pergamon Press, 1993, p.93.

38. Good, op.cit.; Cassidy, op.cit.

39. Davies and Ellison, op.cit., p.23.

40. Cassidy, op.cit., p.13.

41. Psacharopoulos, op.cit.

42. Ross, K.N. and Postlethwaite, T.N. 'Planning the Quality of Education; Different Information for Different levels of Decision-making'. Prospects. Vol. XVIII, No.3, 1988.

43. ibid.

44. ibid.

45. Porter, A.C. 'Creating a System of School Process Indicators'. Educational Evaluation and Policy Analysis. Vol.13, No.1, 1991.

46. See: Silver, P. Educational Administration: Theoretical perspectives on Practice and Research. New York: Harper and Row, 1983; and International Bureau of Education. 'Educational documentation and information'. Bulletin of the IBE. Year 55, No.221, 1981.

47. Silver, op.cit., p.378.

48. Caplan, N. 'The Use of Social Research Knowledge at the National Level'. In Anderson, D.S. and Biddle, B.J. (eds.) Knowledge for Policy. London: Falmer Press, 1991.

49. ibid.

50. ibid.

51. Caplan, op.cit., p.202.

52. Caplan, op.cit., p.194.

53. ibid.

54. Information communication is for some writers so important that they prefer to use the term 'communication system' instead of 'information system'. Smith (op.cit.), for example, states that "Living is largely a matter of communicating..." (p.1); and Dennison and Shenton use the term 'communication system'. However, 'information system' in this thesis is not only about information communication, but it is also, as the discussion of tasks has shown, about identification of information needs, data collection and analysis, and the sources of information. At the same time 'communication' is not only about the transmission of information, but it can also be persuasion, social interaction and relationship, and a vital instrument of social and political change (see Bordenave). According to these interpretations 'communication system' does not carry the same meaning as 'information system', therefore this thesis does not use the two terms interchangeably.

    Dennison, B. and Shenton, K. Challenges in Educational Management: Principles into Practice. London: Croom Helm, 1987.

    Bordenave, J.E.D. Communication and Rural Development. Paris: UNESCO, 1977.

55. Davies and Ellison, op.cit.

56. Hoy and Miskel, op.cit.

57. Windham, op.cit., p.29.

58. Dennison and Shenton, op.cit.

59. Windham, op.cit., p.27.

60. Hoy and Miskel, op.cit., p.358.

61. ibid.

62. e.g. Dennison and Shenton, op.cit.; Smith, op.cit; Hoy and Miskel, op.cit.

63. Hoy and Miskel, op.cit.

64. Hoy and Miskel, op.cit., pp.360-361.

65. e.g. Dennison and Shenton, op.cit.; Smith, op.cit.; Hoy and Miskel, op.cit.

66. Dennison and Shenton, op.cit.

67. Dennison and Shenton, op.cit.; Hoy and Miskel, op.cit.

68. Watkins, P. 'The Fordist/post-Fordist debate: The educational implications'. In Kenway, J. (ed.) Economizing Education: The Post-Fordist Directions. Geelong: Deakin University, 1994.

69. ibid.

70. ibid.

71. Amin, A. Post-Fordism: A Reader. Oxford: Blackwell, 1994.

72. Weber, M. The Theory of Social and Economic Organisation. Oxford: Oxford University Press, 1947.

73. For example: Pugh, D.S., Hickson, D.J. and Hinings, C.R. Writers on Organizations. Harmondsworth: Penguin Education, 1971; Amin, op.cit.

74. Hickox, M. and Moore, R. 'Education and Post-fordism: A New Correspondence?'. In Brown, P. and Lauder, H. (eds.) Education for Economic Survival. London and New York: Routledge, 1992

75. Lipietz, A. Towards a New Economic Order: Postfordism, Ecology and Democracy. Cambridge: Polity Press, 1992.

76. Bottery quotes Bobbit as an advocate of efficiency oriented education.

    Bottery, M. The Ethics of Educational Management: Personal, Social and Political Perspectives on School Organization. London: Cassell, 1992.

77. Bottery, op.cit.

78. ibid.

79. See for example Pajak's 'bureaucratic' and 'educational' approaches to schooling in Bottery (op.cit.). Pajak, E. 'Supervision: a central office perspective. Curriculum. Vol.1, No.12.

80. Pajak, op.cit.

81. Levin, H. 'Work and Education'. In Psacharopoulos, G. (ed.) Economics of Education: Research and Studies. Oxford: Pergamon, 1987, p.148.

82. Lipietz, op.cit., p.1.

83. Mintzberg, H. The Structuring of Organizations. Englewood Cliffs, NJ: Prentice-Hall, 1979.

84. Handy, C. The Age of Unreason. London: Arrow Books, 1989, p.5.

85. Scase, R. 'Organizational restructuring, corporate needs for changing managerial skills, and the role of higher education'. In Brown, P. and Lauder, H. (eds.) Education for Economic Survival. London: Routledge, 1992, p.85.

86. Tomaney (op.cit.) quotes Kern and Schumann. Kern, H. and Schumann, M. 'Limits of the division of labour: new production and employment concepts in West German industry'. Economic and Industrial Democracy. No.8, 1987.

Tomaney, J. 'A New Paradigm of Work Organization and Technology'. In Amin, A. Post-Fordism: A Reader. Oxford: Blackwell, 1994

87. Tomaney, op.cit.

88. Piore, M. and Sabel, C. The Second Industrial Divide: Possibilities for Prosperity. New York: Basic Books, 1984.

89. Scase, op.cit.

90. ibid.

91. Mintzberg, op.cit.

92. Within general organizational theory Mintzberg (op.cit.) considers "school systems" as professional bureaucracies which rely "for coordination on the standardization of skills and its associated design parameter, training and indoctrination."(p.348-349) but with the considerable control of professionals over their own work.; Hoy and Miskel argue that with teachers becoming more professionalised they also attempt to control the decisions about their own work; and Schuit et al. for example claim that "In general, the public school is a distinctive combination of bureaucratic and professional elements..."(p.11).

Hoy, W.K. and Miskel, C.G. Educational Administration: Theory, Research and Practice. New York: McGraw-Hill, 1991.

Schuit, H., Sleegers, P. and Giesbers, J. The Dual Character of Schools as Organizations. Sheffield City Polytechnics, 1991.

93. Bush, for example, explains the sharing of management responsibilities between all members of educational institutions in the 'Democratic model'.

Bush, T. Theories of Educational Management. London: Paul Chapman, 1986.

94. See Watkins, op.cit.

95. Piore and Sabel, op.cit.

96. Lipietz, op.cit.

97. Cowen, R. 'The State, Philosophies of the Market and the Management of Education Systems: Principles and Some Practices in Comparative Perspective'. UNESCO Conference, Beijing 1994; unpublished paper, Institute of Education, University of London, 1994, p.20.

98. Cowen, op.cit., p.23.

99. Fullan, M. Change Forces: Probing the Depths of Educational Reform. London: The Falmer Press, 1993.

100. Scase, op.cit., p.91.

101. Scase, op.cit., p.89.

102. Hoy and Miskel (op.cit.) quote the Aston Team research.

103. Brown and Lauder, op.cit.

104. Morgan, for example, explains: "every aspect of organizational functioning depends on information processing of one kind or another... Organizations are information systems. They are communication systems. And they are decision making systems."(pp.80-81)

Morgan, G. Images of Organization. Beverly Hills: Sage Publications, 1986.

105. Wilden, A. Systems and Structure: Essays in Communication and Exchange. London: Tavistock Publications, 1980, p.203.

106. Kress, G. (ed.) Communication and Culture: An Introduction. Kensington: New South Wales University Press, 1988, p.5.

107. Thorp, J. 'Accountability versus Participation?'. In Hughes, M., Ribbins, P. and Thomas, H. (eds.) Managing Education: the System and the Institution. London: Cassell, 1987.

108. Soucek, op.cit.

109. Hoy and Miskel, op.cit., p.313.

110. Morgan, op.cit.

111. McMahon (op.cit.) argues that, although there as an overall agreement that the quality of education is important, it is also elusive and hard to define because "outcomes, outputs, processes, and inputs have both a quality and quantity dimension."(p.21); Goddard and Leask similarly claim that: "a high-quality educational system is essential to the health and future of a nation. Yet the definition of quality appears to shift according to the values of those who hold influence and power in the system and values of different communities in society.... But however it is described, the only way that quality can be achieved is by the development of high-quality learning and teaching in schools and classrooms."(p.3)

    Goddard, D. and Leask, M. The Search for Quality: Planning for Improvement and Managing Change. London: Paul Chapman, 1992.

112. See, e.g. Hopkins, D. (ed.) Improving the Quality of Schooling: Lessons from the OECD International School Improvement Project. London: The Falmer Press, 1987.

113. See, for example, Horwitz, C. 'Total Quality Management: An Approach for Education?'. Educational Management and Administration. Vol.18, No.2, 1990.

114. One of the reasons for the shift is found in the research. When in the 1980s researchers in schools were exploring efficiency, they found a number of 'new' qualitative factors influencing teaching-learning processes such as: the learning climate, the capability to adapt and change, and the achievement of a wide variety of goals. The problem related to the postfordist EMIS purpose of supporting 'quality' remains: how to measure it.

115. Bush, op.cit.

116. Bush, op.cit., p.108.

117. e.g. decision making points such as: public administrators, teachers, parents, pupils, students, employers, and pressure groups.

118. e.g. ratios between numbers of pupil/students, facilities and different costs involved to complete a year or level in the educational system.

119. The best known educational indicators are those developed by UNESCO and OECD.

120. Bhola, H.S. 'A Model of Evaluation Planning, Implementation and Management: Toward a "Culture of Information" within Organizations'. International Review of Education. Vol.38, No.2, 1992.

121. Carley, M. Rational Techniques in Policy Analysis. London: Heinemann, 1980, p.65.

122. Porter, op.cit., pp.21-22.

123. In this respect, some evidence has been put forward by Ross and Postletwaite who also find that for many years the emphasis of educational information collection was on statistics of students, teachers, and support staff, plants and equipment. The authors have written: "All this work provides excellent information for guiding decision-making concerning the quantity, but unfortunately often provides very little input concerning the quality, of education."(p.315)

    Ross, K.N. and Postlethwaite, T.N. 'Planning the Quality of Education; Different Information for Different levels of Decision-making'. Prospects. Vol. XVIII, No.3, 1988.

124. Mintzberg, H. Power In and Around Organization. Englewood Cliffs, NJ, Prentice-Hall, 1983.

125. ibid.

126. Windham (op.cit.) suggests that in recent years "there has been an increasing recognition that both equity and efficiency of educational systems may require a more decentralized structure."(p.25)

127. Kress, op.cit., p.16.

128. Scase, op.cit.

129. In relation to bureaucratic structures Morgan (op.cit.) argues: "Bureaucrats make decisions by processing information with reference to predeterminated rules. Strategic managers make decisions through formalized or ad hoc processes, producing policies and plans that then provide a point of reference or framework for the information processing and decision making of others."(p.81)

130. Kanter explains this shift in the general organizational environment. She argues that because, within bureaucratic forms, managers manage through rules and procedures they psychologically distance themselves from their staff. In the flexible firm this changes into demands for a higher degree of psychological involvement to generate motivation and morale among staff; with it comes greater understanding of human relations and inter-personal skills.

Kanter, R. The Change Masters. London: Allen and Unwin, 1983.

Chapter 4: SOCIAL BACKGROUND OF SLOVENIA AND THE FIELD EXPLORATION OF ITS EDUCATIONAL MANAGEMENT INFORMATION SYSTEMS

4.1 Introduction

This chapter focuses on Slovenia, and analyzes directions of social and political change in Slovene society. The purpose of the first part is to show that Slovenia is a country in transition from an industrial to postindustrial society and that this process involves major changes in the Slovene economy, politics, and education. It also means changing management structures and principles and therefore a changed EMIS. The purpose of the second part is to report on the field work.

Thus, in detail, the first part of the chapter discusses a transformation of the political system from a socialist to a pluralist one. The chapter then shows the transition of the economy, from a mixed economy to a market economy. The chapter also analyses changes in Slovene education. It will be shown how in parallel to the crisis in economy and politics in the 1980s, education has undergone several changes in curriculum, and in organization and management. The abolition of the 'oriented education' [*usmerjeno izobraževanje*] and some of the most recent trends in educational development will be discussed.

As indicated, the second part of the chapter is the analysis of the field work conducted in Slovenia[1]. In detail, this part of the chapter starts with a brief introduction about the choice of the field work methods in both countries studied in the thesis. Then the chapter analyzes the field work. Firstly, it analyzes respondents' views on general educational management development; and secondly, their opinions of the changes in the management of the information systems in education.

4.2 Slovenia in times of the social, political, and educational reform

The discussion in this part concentrates on contemporary political and economic transition and on some developments in the educational system in Slovenia. This brief analysis is intended to link the theoretical and empirical chapters of this thesis and to contribute to the development of the main argument by exploring some elements of the transition which Slovene society is going through. The understanding of the socio-political, economic, and educational background of the country in a major historical transition is also intended to make clearer the subsequent focus of this chapter which is the exploration of educational management and EMIS developments in Slovenia.

This thesis argues theoretically that in postindustrial societies educational management and the EMIS in particular change in certain characteristic ways. The argument of this part of the chapter is that Slovenia today is on its way into a postindustrial way of life and that education is experiencing

major challenges to respond to new social demands. To test this argument this chapter firstly analyses the major political and economic changes in Slovene society in recent years and then explores some of the developments in the Slovene educational system during the same period.

4.2.1 Socio-political perspective

Slovenia's situation today is a result of three main factors: the global collapse of socialist regimes in 1980s; accumulated problems and unresolved differences between the former parts of Yugoslavia; and Slovene internal socio-political and cultural processes. As the first one is widely discussed in literature, this thesis mainly focuses on the last two.

The processes of overall social transformation in Eastern and Central Europe from a predominantly state governed system to a system based on a market economy and democratic political relationships started in the mid 1980s. These democratic processes in Eastern and Central Europe changed the balance of power within these countries. Before that each of the communist governed countries went through a deep crisis. In case of Slovenia the crisis developed and escalated within former Yugoslavia.

From the end of the Second World War until 1991, Slovenia was one of the six republics of the Socialist Federative Republic of Yugoslavia (SFRJ). It is argued in the literature that: "Yugoslavia was an artificial union of its constituent elements - republics and autonomous provinces"[2]; the same

source claims that differences between constituent parts were not just national, religious, and historic but also cultural and economic.[3] The last Yugoslav Constitution from 1974 is generally considered to be an attempt to overcome such heterogeneity. The Constitution, however, encouraged a more independent status for each republic and autonomous province[4], and within those for each municipality and community.[5] Gantar, for example, writes that:

> From 1974 to the late 1980s, Yugoslavia was relatively decentralized because of the sensitive multiethnic character of the country. Some degree of self-administration was granted to the republics; and municipalities - the basic units of local government - had substantial responsibilities for providing... public services.[6]

On the other hand the 1974 Constitution contributed to the escalation of "particularist tendencies and conflicts among the republics"[7]. Each republic was becoming more and more like an individual state with its own political and techno-bureaucratic structures and each with its own political party (in every republic the League of Communists).[8] At the same time the federal government was always trying to control republics and municipalities which contributed to the expansion of the 'self-management bureaucracy' at the federal level.[9]

The political processes led to the disintegration of the federal economy which further led to unproductive and expensive production processes.[10] These increased the gap between developed and less developed republics.[11] Each republic and autonomous province experienced its own economic and political crisis - which contributed to escalated nationalism, with

consequences which were most evident in the nationalist conflict in Bosnia.

The third factor in the Slovene transition were its internal social developments. Although on a global level the processes of the collapse of socialism in many countries seem quite similar, the processes of political pluralisation took different paths. Four main factors have been suggested in the literature[12] defining the specifics of the Slovene transition from socialism to a system of plural political democracy: the phenomenon of 'civil society'; the autonomous initiatives of the intellegentia; the 'reformers' within the political elite[13]; and the socialist principle of 'self-management' which created the minimum conditions and space for relative autonomy in culture, economy and, partly, politics.

The first factor contributing to the political transition in Slovenia was the initiatives for the 'civil society'. The literature uses the term 'civil society' in different ways.[14] At the most general level civil society constitutes households, economy and social power groups.[15] Within a one party socialist political system it represents 'anti-party activity'.[16] In contemporary societies the 'civil' is represented by the growing numbers

> of new social movements, such as feminism, environmentalism and pacifism. Frequently engaging in direct forms of social action, these movements articulate and defend such 'post-material' values as gender identity, democratic rights and environmental safety.[17]

Some of the studies of the phenomenon of civil society in Slovenia[18] show that the 1980s, the period of global economic and political crisis, were

characterized by the emergence of the 'civil society' through a spectrum of individual and group initiatives for social transformation. Civic initiatives were closely related to the transformation of the values and attitudes of the Slovenes. In this respect Fink[19] claims that this process encompassed elements of modernization[20] as well as a partial break through of postmodern values[21] into social consciousness. She explains that the new modern values that were formed through the 1960s and 1970s became explicit in the 1980s.[22] At this time public opinion surveys[23] showed an increase in criticism of the socialist political system and the governing communist ideology and the clear overall interest of Slovenes in a multiparty parliamentary system. The same surveys also showed the evident aspirations of Slovenes for reform in the economy, especially reform of 'social property'[24]; and criticisms of the domination of politics over the economy. Another important point brought out by the surveys was the increased nationalist momentum with a clear tendency towards full Slovene sovereignty and the formation of an independent state.[25]

In parallel with the transformation of the value system new social subjects emerged within Slovene civil society. For example, in the 1976 there were 3600 different social groups registered in Slovenia, while in the 1990 there were already 10500.[26] It is argued in the literature that most of these new social subjects emerged on a selforganizing principle and were influenced by intellectuals with an academic background mainly in humanities, social science and literature.[27] Among the best known were: the Youth organization and its magazine 'The Youth'; a students' organization and its radio station; peace, ecological, and spiritual movements like the 'Greens';

professional associations like the Society of Sociologists or the Society of Slovene Writers; professional reviews like the 'New Review'; and the Association for Civil Rights.[28]

The phenomena of the 'new social movements' are related to the changes in social values[29] but also to the changes in the social structures of developed industrial societies[30]. This is typical for both socialist and capitalist countries.[31] The processes of social transformation in late capitalist industrial societies and in industrialized societies of socialism are very similar because, as the literature suggests, the social structure tends to be a reflection of modern production forces[32], and changes in industrial production. The 'new social movements' are then phenomena which emerge in societies that are in transition from industrial to postindustrial.

However, political transition in Slovenia is not only related to the autonomous initiatives and activities of a civil society and the shift in social consciousness. The literature[33] suggests that the role of the 'reformers' within the old political elite (the League of Communists) made an important contribution. In this respect the research on political culture, reflecting some typical characteristics of the Yugoslav Communist Party, will be briefly discussed.

Two types of political culture[34] have been distinguished within the League of Communists of Yugoslavia in the eighties. The first was defined as the 'real-socialist' (*realsocialistična*) political culture, with the characteristics of noncritical loyalty to the model of government based on a monopolist

party.[35] This type of political culture, explains Fink, correlates with the traditional, pre-industrial socio-economic systems with their authoritarian distribution of economic and political power and with a high degree of traditional and ideological-political (civil) religiosity.[36] The second type of political culture present in the politics of Yugoslavia in 1980s, also called Eurocommunist, leaned towards political pluralism and a critical distance from the League of Communists as a monopolist organization.[37] This type of political culture, claims Fink, is related to modern, industrial, and post-industrial social systems and to the increasingly democratic structure of economic and political influence.[38]

The tendencies of this last aspect of the political culture in the second half of the 1980s were evident only in Slovenia and Croatia.[39] Because the political cultures of Yugoslav societies were different at the time, Jambrek and Toš argue, the political cultures of their political elites differed as well. One example of this last claim is the Table below, which shows the views of the party members on the topic of 'political pluralism' throughout the country.

Table 4.1: Attitudes towards political pluralism in Yugoslav republics (excluding autonomous provinces)[40]

Problems	Montenegro	Serbia	Bosnia and Hercegovina	Macedonia	Croatia	Slovenia
Aspirations for a multiparty system	6	9	12	14	19	36
Acceptance of existence and function of new alliances	9	8	14	14	19	44
New alliances' own media	12	10	18	16	24	46

The Table shows that members of the Communist Party in Slovenia were those most in favour of a pluralist solution. The reformist part of the Slovene League of Communists has been one of the key forces in the pluralist transformation in Slovenia.[41] When in 1989 the Communist leadership of Slovenia announced its 'dismounting' from the power and renounced its position as the only leading political party, the reformist group formed its own party[42]. At the same time other parties and associations were created.

The processes of political pluralization and democratization in the 1980s in Slovenia finally led to the first multiparty elections and the creation of the first Slovene parliament in the spring of 1990. After these developments, argues Ferfila, within Yugoslavia "only two outcomes were possible - the building of a confederation or secession by one or more of the republics."[43] In this respect Mencinger explains:

> The legalization of political parties in 1989 created the necessary conditions for free elections and parliamentary democracies in the republics. The result of the elections divided Yugoslavia into parts which, together with the emergence of nationalistic movements and quickly growing animosity between Croats and Serbs, led to the breakdown of the country.[44]

The federal government tried to stop the deterioration of relations between republics and especially the deterioration of economic performance, but all attempts were blocked by the republics. "In autumn 1990 Yugoslavia in fact ceased to exist as an economic unit."[45]

From a Slovene perspective, the literature suggests, the final reason for the secession was in:

> The assault on Yugoslavia's financial and credit system, which was engineered by Serbia in December 1990, [which] have [sic] destroyed the last chance for negotiations among the republics over a new confederal structure. It left secession as the only alternative for republics seeking to distance themselves from the chaos and disorder in Yugoslavia.[46]

In June 1991 Slovenia declared its independence. During the very first night Slovenia was attacked by the Yugoslav army. The war lasted ten days. The federal army, "which was sent to the borders was badly surprised by the resistance"[47], did not succeed[48] and they moved to Croatia. "The war in

Slovenia and Croatia meant the end of Yugoslavia."[49]

One of the basic conditions for the transition from industrial to postindustrial society, as mentioned earlier, is a democratic political system. With the establishment of the parliamentary system in 1990 in Slovenia new dimensions of political participation have been opened; at the same time new possibilities have been created for economic development. These developments in the economy are discussed next.

4.2.2 Economic perspective

Most of the theories about postindustrial society are a critique of the patterns of an industrial society and economy.[50] These patterns, such as rationalization and bureaucratization, were in socialist countries accompanied by a high degree of centralized planning and political control. Ideological goals were the priority for the economy. Kiezun[51], for example, explains that the politization of all life was typical of all socialist countries and that economics and ethics in these countries were equivalent to politics.

The thesis here argues that Slovenia even within Yugoslavia had reached a high level of development in industrialization and had started its transition into a postindustrial society not just politically but economically also. The striving for political independence in Slovenia is closely related to its economic development. Industrial development with its growing service sector and the need to compete on international markets, especially

in the last ten years, required changes within the organization of the Slovene economy and in the patterns of political decision making.

In comparison to other 'socialist' states, Yugoslavia in the 1970s and in the 1980s was characterized by a specific kind of 'authentic' socialism where certain elements of a free market were present. The further developments of a free market economy in the most developed republics, like Slovenia and Croatia, were blocked by the lack of political democracy.[52]

Along with the national push for political independence there was (and still is) a difficult process of economic transition going on in Slovenia. This process has been mainly distinguished by the transition from a mixed (planned and market) to a market economy[53], by the transformation of state owned property (called 'social property') to private property, and by the change of the principle of 'worker's self-management' (*delavsko samoupravljanje*) to entrepreneurial management.[54] There has also been a process of stabilization of the newly independent economy and the changes in production processes. These characteristics of the contemporary economic situation in Slovenia are briefly analyzed in the next paragraphs.

As mentioned earlier, at the end of 1980s, the former constituent parts of Yugoslavia had some advantages for economic and social transition in comparison to other socialist countries. Mencinger argues that:

> Most of the so called essentials for the economic transition: *decentralisation, price reform, openness to the outside world and diversification of ownership* were at least partly met before the political and ideological collapse of socialism.[55]

The economic independence of Slovenia began in October 1991 when a new currency, the Slovene Tolar, was introduced.[56] One of the next steps was the transformation of state owned property to private property, especially in manufacturing. The EIU Country Report indicates that in 1994 Slovenia laid the foundations for a full market economy: 1333 out of 1345 publicly owned enterprises submitted their programmes for privatisation for approval by the authorities[57]. In principle this transition should be finished by the end of 1996.[58] The process of privatization has proved to be painful because "of economic, social and political tensions emerging from the redistribution of income, wealth and power."[59]

The stabilization of the economy has also been affected by the drastic change in markets outside the country. Slovenia was in economic terms always the most developed republic of Yugoslavia. After the break-up with Yugoslavia, according to the Financial Times, Slovenia lost "one third of its export markets" to other republics which was a "shock for an economy where more than 60 percent of GDP is realised through trade."[60] Therefore orientation towards other foreign markets was necessary. Greater exposure to international competition has contributed to a quicker change towards postindustrial society.

The changes in Slovene 'markets' and the changed role of individual production factors shows that Slovenia is on the move from industrial to postindustrial society[61]. One of the parallel factors that shows this transition is the expansion of service industries, especially in the last ten years. Presently almost half of all employees work in the service sector[62] and

produce around half of the GDP[63]. Computerization and competitive market forces have contributed to the collapse of many large, mainly first and second economic sector, industries and an enormous increase in small business and self-employment has been noticed[64]. On the other hand, these contemporary changes in economic structure have produced large-scale redundancies[65].

Many changes are happening also in the organization and management of economic enterprises. The changes of ownership opened up possibilities for private initiative.[66] The principles of a free market economy have brought more autonomy to individual firms, whether in the 'social' or 'private' sectors. The socialist 'self-management' organization and principles[67] are being replaced by more entrepreneurial ones. The adaptation to structural changes in a small economy, argues Jaklič, is a dynamic and constant process; therefore it is necessary to develop a management style which would help quickly and efficiently to translate the ideas and the words into action.[68] Lately, a lot of emphasis has been given to the training of managers[69] and technologically skilled labour. More relevant knowledge and skills are becoming also one of the central issues in the development of education.[70]

4.2.3 Educational perspectives

Since June 1991, when Slovenia declared its independence, the Slovene nation has for the first time in its history been living in its own country.

The developments before and after Independence show that Slovenia is clearly on its way to major social changes. Changes in the political system and in the economy have been accompanied by changes in education.

In this section the chapter suggests that reforms in education in Slovenia started before Independence and that they started firstly in curriculum and were followed by changes in the organization of the educational system and by the development of new legislation. The chapter here focuses on those significant changes in education which provide a wider framework for the field work exploration and the analysis of the results in the next part.

As mentioned earlier, since the Second World War Slovenia was a Republic of the Socialist Federal Republic of Yugoslavia. Until 1991 Yugoslavia comprised six sovereign republics and two autonomous provinces. Three official languages were spoken. The constitutional principle of sovereignty entitled each republic to develop and manage its own educational system. From the organizational point of view, the educational systems were identical throughout the country[71] but teaching and learning contents differed markedly; and the outcomes differed as well.

One of the attempts of the federal government and the leading ideological force, the League of Communists, to equalize education was the introduction of so called 'Oriented Education' [*usmerjeno izobraževanje*] in 1980. The main objective was to connect education closely to the economy.[72] The main idea was that the educational system should provide every pupil

in secondary schools and every student at the university level with the correct mixture of general knowledge and skills for a certain profession.[73] The 'orientation' towards an 'optimal mixture' (two, three, and four year secondary schools) for every pupil started at the compulsory primary school. Representatives from socialist enterprises were involved in educational decision making through so called 'communities of interest' [*interesne skupnosti*] and played an important role in curriculum development and in the financing of education.

'Oriented education' did not bring the expected results. It was considered to be a failure. One of the major reasons that this reform did not succeed was that it was a political act and it was introduced despite major opposition from professionals (academics, teachers, schools), parents, and many others from the economic sector. Other reasons, often stressed in the literature, were the shortsightedness of the economic sector in educational policy making and neglect of individual needs and capabilities in learning.[74] The reform also did not take in account general social and scientific and technological developments of the world and the society. In this respect Pediček writes that the misfortune of the third educational reform in 1980 was in its drawing on the demands of the first and second industrial revolution while the world was already in the third, information revolution.[75]

Slovene education started to change in 1989. Since then major changes have occurred in secondary schools (which are the focus of the field work in this thesis). The old tri-partite system - gymnasium, technical and vocational

schools - was back but with a new curriculum.[76] The two subjects ideologically related to the socialist political system were abolished: 'Self-management and the basics of Marxism' and the 'Defence and protection'.[77] External examinations in the form of 'final' and *'matura'*[78] exams were introduced.

With the gradual reform of the curriculum since the 1989 there came also changes in legislation and in the organization of the educational system. Old laws and regulations have been amended. In the 1993 the 'Law of higher education' and the law concerning organization and financing of education have been changed. By spring 1996 all main educational Acts were new.

During 1995 a major reorganization of the Ministry of Education (in literal translation, the Ministry of Schooling) took place. New agencies have been created, like the Centre for Professional Education and the Centre for School and 'school-linked' activities. Although they are publicly financed they are not part of the Ministry. The most interesting change, for the thesis, is the new legislation on organization and financing of education from 1996. The major innovation is the creation of 'school authorities' (14 all together), as a part of the Ministry, whose main tasks are management of staff, finance and organizational duties defined by the Law.[79] They will be established in the next academic year.

The process of educational reform has not been smooth. Several different political positions and professional opinions have been made explicit in this

period.[80] There have also been numerous public discussions on educational issues. One of the concerns, often expressed publicly but not taken into proper consideration, is the demographic situation of the country.

Slovenia has one of the lowest birth rates in Europe[81] and the natural increase of the population (quite steady in the 1970s at around 7 percent) fell to minus 0.1 percent in year 1993[82]. One of the reasons for lower birth rates is that most of parents are employed and female employment especially is one of the highest in Europe[83]. With most of the parents working, education is an important and influential factor: it is a general view that in such conditions every child should receive good schooling.

Because 99 percent of education is public it is expected that the state would provide the best possible conditions for further generations. Despite demographic facts and public opinion, education has not been a top priority of government policy in recent years. Economic problems with growing unemployment, consolidation of the political system, international affairs with disputes about borders and minorities, and the army and its development, come before education in general policy making and financing.

Within this general framework, educational organization and management, which is a major focus of this thesis, are changing. The lack of human and financial resources is probably the main reason that management, and educational information systems have not been researched in Slovene education. The fieldwork conducted in Slovenia and analyzed in the

remaining of the chapter is a contribution to this area of research.

4.3 Methods of empirical research

In the absence of social research in this area the methodological approach of this thesis is an exploratory and qualitative one, looking for a deeper understanding of chosen phenomena. The EMIS phenomenon is explored in the field in two countries. The major method for data collection is the in-depth interview[84]. Where they are available, documents related to the topic are also used.

The selection of participants for interviews[85] was purposeful (not random) following the principle of 'maximum variation'[86]. This principle is well explained by Seidman:

> "maximum variation sampling... provides the most effective basic strategy for selecting participants for interview studies... [maximum variation] can refer to both sites and people... The range of people and sites from which the people are selected should be fair to the larger population."[87]

The field exploration of this thesis has been limited to secondary schools and the first few layers of state educational administration. In Slovenia five secondary schools and four participants on the Ministry level were chosen for interviews, following the principle of maximum variation. Among the secondary schools 2 were comprehensive, called gymnasia (*gimnazija*), and 3 were professional, also called 'technical secondary schools'; of these, 2 were central (in Ljubljana) and 3 were non-central. All the participants

(excluding pupils) had at least six years of working experience and a minimum of four years in their present situation. *The questions for the field work (except for pupils) are listed in Appendix 1 of this thesis.* The discussions with pupils were not structured.

There were 21 individual participants and 6 groups interviewed:
5 headmasters,
4 deputy headmasters,
2 school advisers,
6 senior teachers,
4 junior teachers, and
6 groups of pupils aged 16-19 years.

On the Ministry level four participants were interviewed:
1 junior adviser in curriculum development,
1 senior adviser in curriculum development,
1 senior adviser in programme development, and
1 head of advisers.

The choice of participants in England (interviews were conducted a year later) was influenced by the fact of 'information saturation'[88]. Because the interviews in Slovenia showed that a lot of information was repeated, the number of participants in England[89] is smaller, although the principle of maximum variation was still used. On the institutional level 3 schools were chosen for interviews. Among them 2 were state schools and 1 was a public (private) school; one of the schools was central (London), one semi-central

(London suburbs), and one school was in the countryside.

13 participants and three groups of pupils were interviewed:
2 junior teachers,
3 senior teachers,
5 deputy heads or heads of the year/form tutors,
3 headteachers, and
3 groups of pupils, 14-18 years old.

Two educational advisers were also interviewed. Both are presently working within LEAs and both have previous experience in the ILEA; both were also acting as a communication link between the LEA and government, and schools and government.

4.4 Field analysis of the main educational management developments

In the earlier analysis this chapter identified Slovenia as a country in transition from industrial to postindustrial society; and the thesis argued that educational management changes in postindustrial social settings in specific ways. This part of the chapter analyses recent educational management developments in Slovenia through the views of those most closely involved in education in order to test the theoretical propositions of this thesis.

What follows then is an in-depth exploration of educational management.

It is intended to highlight participants' understanding of major changes in this area in Slovenia in a sense of why and what has changed in educational management in the last decade. The findings will be in Chapter Six compared with those from England with the educational management characteristics suggested in the theoretical part of the thesis guiding the main themes of the comparison.

4.4.1 Main reasons for changes in educational management[90]

The participants' were asked to comment on major educational management developments and the reasons for these changes. The answers to the last part of the question will be analyzed first. The intention of this analysis is to extend the discussion on Slovenia's transition to postindustrial society by making more explicit the specific relations between social, political, economic, and educational developments.

Respondents' descriptions[91] of the main reasons for educational management changes can be divided into three main groups: those who consider that economic and general social developments generated significant management innovations, those for whom changes in the political system were the most influential, and those who interpret economic, political and general social alterations as equally important in influencing educational management.

Among those who consider economic and social factors as being very important for the changes was one teacher (T1/1) who said that present educational management changes "are absolutely not" related to the establishment of the new political system. "Today's politicians do not think about education at all, they haven't intervened in it, they haven't got any relation to it", claimed the respondent. Similarly, one headmaster (H3) assured that the important issue of previous management, the control, "this hand above us, has disappeared in the last 7 or 6 or maybe 5 years; this is not because of 'democracy', this happened two or three years before the 'new state'". One of the teachers (T2/5) was convinced that the changes in educational management are related to the changes in economic development; and the teacher (T1), deputy headmaster (D1), and the school adviser (SA1) expressed the idea that much has changed in education in the last 8 to 10 years because of the general social changes in Europe and influences that come from foreign educational systems to Slovenia.

"In my 14 years career as a headmaster... I had to correct myself many times, because things just did not correspond any more to the times, and it [the respondent's way of management] was always related to general circumstances and not just political... I have never been subject to politics... the society changes and so have I", was the view of one headmaster (H5). Along the same lines is also the answer from the adviser (A2) from the Ministry: "I would say that [educational management and political changes] they coincide by chance, they just seem to be related." According to her educational management changed "because the way we used to work... did not change for a long time and people became bored... It is not clear who

is the actual initiator of what is happening, but the generator is the economy." At the same time she expressed concerns about being too positive, "just changing is not enough, it is important how these alterations are done... I mean with what objectives, and who is mastering them... to be clear about the conditions 'at-the-margin', from where to where... that we could know who we are and where do we go. And this is missing."[92]

A second group of participants considered educational management changes primarily to be related to the establishment of a new political system. Some of the views were: "the [educational] system was changing all the time, but we never had power and a say as we do now", was one teacher's (T2/4) comment, arguing that educational management "is connected to politics. Before it [education] was managed from the top, but now we also have a say." Similarly another teacher (T3/5) was convinced that management in education is related to politics: "with us all the things have loosened up fundamentally, because politics loosened... There is no more the control and pressure under which we used to live before." One headmaster (H2) and an advisor (A4) were absolutely sure that educational management changed radically from 1989 as a consequence of political processes: "at that time you could feel that there are some [political] guidelines, but after that, after Independence [in 1991] contact with the policy makers has been lost"(H2). The politicians, commented another respondent (A4), are at the present much concerned in safeguarding their positions and their political stability.

A third group of respondents considered educational management

developments as being the result of economic, political and other social changes. Describing the reasons for changed management one teacher (T1/5) summarized: "It is both, the break in the political system and the change in society, in fact in the economy, all together. An entire transformation of [our] society has happened... All the differences between people, that have not been evident before, are coming out now. And this is probably not just because of political changes, but mostly because the whole world is changing... the society ripens"; and the adviser (A1) explained: "the progress spreads in waves and these waves are coming to us... you cannot stop the progress", continuing that: "[in the society] you cannot have a medieval educational subsystem, while the economy is modern. Of course there is no economy without politics. Politics too is important but first you must have a basis, and this is the economy."

The participants had then different opinions but they agree that major and important changes in education have occurred. Participants' views show that there is no agreement about the time when changes started and the prevailing reasons for them. For some this is a long term process, which began some 10 years ago driven by economic requirements and social tensions of late socialism, and for some it is a more recent process, related to the politics of parliamentary democracy. There were also participants who considered that Slovene society has became aware of and open to worldwide 'waves' of development, already identified in the theoretical discussion of postindustrial social developments under the term 'globalization processes'.

4.4.2 Major changes in educational management

In the Chapter Three this thesis suggested that educational management in postindustrial societies develops in a characteristic way. It was proposed that principles of postfordist educational management are loose and flexible hierarchical structures, decentralization of decision making processes and sharing of management responsibilities, and an emphasis of individuals' creative conduct. The fieldwork analysis shows how in fact participants in Slovenia interpret current changes.

The most evident changes in educational management, according to respondents, have taken place in schools. "A whole new world has been opened... the whole thing has become much more relaxed... and we have got much more freedom in every day teaching." said one teacher (T2/3); and another teacher (T3/3) was sure that "before we were much more tied to the rigid programme... now I plan by myself and I can change, if it is necessary during the same lesson... now we have much more autonomy."

One respondent (T1/5) explained that now there is no longer 'only one truth' in the school and added: "Before we were much more like one another... now we behave in a more multicultural way... all the differences between people are coming out now... we have started to talk about them." The advisor (A2) argued similarly: "before many things in education were planned for 5 or 10 years ahead... with the same [prescribed] foundations for the whole educational system"; but the respondent also added that "the differences between schools and between individuals existed even before

and could never be exceeded."

The shift in educational philosophy and curriculum was explained by the adviser (A1): "before... in the one party system... there was some kind of sociocentricity prevailing, focused on the contents of teaching... designed by politics." According to the same participant a multiparty system today "requires a new teleology, a new purposefulness of the system, and this is anthropocentricity... the human being is now in the front line."

For one teacher (T3/5) the most important change in educational management is the abolition of the control and the pressure they lived under before and teachers are now free to introduce new teaching methods. For her the whole educational system has been loosened, and it seems to be unorganized, which allows to schools more freedom in manoeuvring. She concluded: "I hope this won't change and we won't become, I mean education, once again some kind of military institution." The same argument about control was put forward by the headmaster (H2) who said that the collapse of the old system and its legislation prevented the state from continuing its control of its subsystems. And as the new system was not born yet, a kind of vacuum has been created "in which we can do things in a very flexible way."

One of the teachers (T1) was not absolutely sure that management changes have been introduced to the same degree in every school explaining that if teachers are suppressed by older teachers or a headmaster, the same relation is then transmitted to the pupil. "This is much changing today", she

admitted, "but it all depends on school leadership." One respondent (H5) saw the new role of headmasters to improve the efficiency of the whole school management by getting "closer to a human being to find out how to increase everybody's pleasure to work, to give more of themselves."

One headmaster (H4) commented in a very comprehensive way. For him the major changes in educational management were firstly in the teaching process, as the teaching programmes are less rigid, not so detailed and prescribed as they used to be, and it is up to teacher now to decide where to put the emphasis. Secondly, the respondent explained, overall school management depends much more on heads who can now make decisions on their own; individual responsibility and individual accountability had replaced previous group (collective), so called 'self-management' decision making, where nobody was really responsible personally. Thirdly, the participant recognized, financing has become more centralized, which means less dispute about salaries in the school, but also more rigid financial standards.

Among the general comments on recent educational management developments were also some that showed that changes were not evenly introduced into all parts of educational system. One deputy head's (D1) opinion was: "I wouldn't agree that things in educational decision making have changed very much, at least not on those higher levels[93], within the Ministry; it is though different in schools."

These views of respondents stress, overall, major changes in educational

management. To test the theoretical considerations suggested for fordist and postfordist educational management, the analysis now focuses on the respondents' perceptions of changes in hierarchical structures and control, general policy making, and every day management of schools.

4.4.3 The nature of hierarchical structures

Highly hierarchical structures and detailed control mechanisms within the educational system were in this thesis earlier defined as typical of industrial societies. Postindustrial social developments change hierarchical and bureaucratic control relations in education. The theoretical proposition was that hierarchies become less vertical, that bureaucratic principles based on division of work and detailed rules are replaced by individual creative conduct, and that detailed mechanisms to control individual performance are overtaken by teamwork coordination.

The fieldwork in Slovenia shows that the changes in the hierarchical structures, bureaucracy and control in education coincide with the abolition the 'System of Oriented Education'. One of the teachers (T1) remembers: "It was living chaos in schools; we were all confused, the teachers and the pupils; the programmes were too superficially prepared... and we just could not stick to the directives. Of course schools differed a lot... some were very conservative, where young teachers had to obey the elders and were limited a lot in modernising the classwork." One headmaster (H3) explained: "Looking nine years back, you always felt that there is somebody

above you, and that everything is very directed... everything was prescribed. The only thing we had more freedom in then than now, is financing... There was a lot of pressure from the Ministry of Education in the form of control through advisers/inspectors, regular school reviews, reports... and all had bad psychological influences on all people in the school."

Many other participants expressed the same opinion (T1/2, T3/3, TD2/3, H2, T1/5, A1, T3/5, SA1) by saying that the previous educational system was much more hierarchical than it is now; they all felt that it was more bureaucratic and highly controlled.[94] There is a lot of evidence from the field that control, be it in schools or in a system as a whole, has ceased, and that the autonomy of schools and the individuals within them has increased. Teacher and deputy headmaster (TD2/3) pointed out that the responsibility has moved down to schools and that she feels "much more responsible now, because nobody really controls my work, but I feel responsible to the pupils and their parents"; and a headmaster (H2) said that schools have been "left on their own now... which means, if you are practical and smart, you can do a lot." The only constraint he saw was the financial limitations and even there "you can find some sponsors from outside".

That the old form of control has been abolished clearly shows in the adviser's (A4) comments that the Board of Education has lost its supervisory, controlling function. This function at the time meant a kind of linkage between schools and Ministry. Presently the Board only performs

an expert role. The same respondent was convinced that some kind of supervision should still exist: "It depends how you define supervision... it should be in a function of a professional approach to educational development... this is also a ground for conflicts because the state sees different objectives of control from... the Board of Education and also schools."[95] There were other participants who agreed that some kind of control should exist, especially in cases when something goes wrong (H4).

The control has not ceased totally. There is evidence from the field showing that a new kind of control is emerging. A deputy headmaster (D4) explained that the present state of calm (without the old control mechanisms) is just because the new administration is being formed, but the pressures can already be felt in the finance area: "We cannot afford to send more people to the seminars, especially those which are not organized by the Ministry." The head (H2) recognized that the state is trying to centralize and control areas like finance and enrolment, which is diminishing school autonomy and does not contribute to a better quality of education. He added: "each school can do much for its own development only if it has 'free hands'; but it is also true that some schools develop too slowly and maybe this is the reason for more control from above." The same participant indicated that statistical and other new forms which schools have to fill for the Ministry represent another argument for increased control.

Many respondents then indicated that there is still quite a high level of autonomy in schools; but "The headmaster's position is not as autonomous

as one would think... all the time he or she is aware that his post depends on what the state thinks, because it is the Ministry which has to agree to the nomination of the head... and the state can give agreement or not... there are no clear criteria", said the adviser (A4) and concluded that the whole system is becoming more politicized and: "as the money is absolutely centralized, you can 'buy' anyone now and build the image you want." This opinion also points to a certain renewal of control within the educational system and anticipates different hierarchical structures.

Respondents' views show that the hierarchical structures of the educational system have been changing: schools are becoming less hierarchical, while the government is highly distanced from schools. Schools, as long as they do not exceed a certain number of pupils to be divided into departments, have always had relatively flat hierarchies - teachers, deputy headmaster and the headteacher have remained as the three main layers - the same as before, but it is their relations that have changed. One teacher (T3/5) indicated that within a school there "is a lot of freedom and encouragement on the part of heads to be innovative, and creative as a teacher; before it wasn't like that." It is, though, different in the external relations of the school.

The relation between schools and the Ministry was explained by one participant (H4): "Linkage between Ministry and schools is missing... I do not know who is to blame for this break... headmasters need a lot of support from them[96], if they want a school to function properly." He also added that if the Ministry was organized differently, schools could improve

a lot, as not all schools are developing on their own. The same observation was made by a headmaster (H5) saying that there is a "great vacuum" between institutions and the public administration of the educational system. "The whole apparatus is weak, anarchic, not consolidated at all... it is not strong as in Austria, Germany and elsewhere, where they [Ministries] are servicing educational institutions." One teacher (T1/5) felt that the distance between schools and some Ministry institutions is too great so that "we [teachers] never felt that the minister is one of us but rather one against us, and this is certainly not good. Well, maybe we teachers are in principle much against authority."[97]

Related to the changes in hierarchy are bureaucratic procedures. Postfordist educational management principles anticipate diminution of the classic aspects of bureaucracy where work is strictly divided between people and departments, where procedures and rules are set in advance, and where rigid and distanced relations between people are typical. On the theme of bureaucratic procedures, participants did not give any evidence of changes within schools, but they were quite concerned about the Ministry. For the deputy (D1) the management from school upwards is not satisfactory: "On the Ministry level an absolute bureaucratic and rigid mentality is present... we know how things are done in other countries, but people in the Ministry just do not... They want to make us[98] uniform. Of course it is much easier for them to work if in Slovenia we all are the same, and that is their main problem." Bureaucracy therefore has not diminished on the governmental level. Another example of typical bureaucratic procedure was for one teacher (T1/2) the introduction of matriculation[99]: "The decision was

made and the exams should be in place from next year on. There is not enough time to prepare the matriculation properly, to test it and to get teachers more involved", she said, and offered another example about bureaucratic procedures being too slow for producing innovations in school programmes: "Why should we teach in an old fashioned manner or offer out of date contents, just because the new ones have not yet been approved[100] by the National School Council?" [101]

Typical bureaucratic procedures, without any real purpose, are for the teacher and at the same time a deputy head (TD2/3) the statistical forms they have to fill in. She argued that they have not changed for the last six years. And one headmaster's (H1) opinion was that the existing system does not function, because of its administration. He explained that whenever they have tried to seek some advice or help within the Ministry, it was very difficult to get some: "They would say: we haven't got legislation... the financing is not settled... so we cannot help. In fact their first role should be to sit down with their professional departments and organize themselves... it seems they are quite helpless." He also mentioned that not so rare are the occasions where people from the Ministry seek advice from schools. Another participant (H2) had frequently had unsatisfactory experiences with the Ministry's administration: "If you have a problem, they will send you from door to door, from one department to another."

All advisers from the Board of Education[102] who were interviewed recognized that their professional role and possibilities for action have

changed for the worse in the last two years and that bureaucratic procedures have increased. One of the advisers (A3) thought: "My competencies are much more limited... gradually, new rules have been introduced and through them it is much more clear on what and how" individual advisers should work. Another adviser (A2) pointed out that in the last year or so the administrative side of their work is becoming more emphasized and added that the whole system, as it is functioning now, does not encourage development. One participant (A1) said that it would be much easier to work in the public sector, if the state had a clearer vision.

Two clear issues related to changes in hierarchy, bureaucracy and control are evident from the responses. Firstly, the old system has collapsed but not totally, and the new one is still developing. This has created a space for school autonomy, which is much appreciated in the schools. In hierarchical structures, control mechanisms, and bureaucratic procedures, schools show characteristics of postfordist management. The developments on the overall system level were predicted neither by fordist nor by postfordist educational management principles. They were defined in the field as 'anarchic'. Although autonomous, schools still need balanced support and general guidance from governmental bodies but they cannot get it, because the organizational structures are not appropriate, legislation is out of date, and national educational goals are not established. Thus, a lot of confusion and a feeling of anarchy has been created. In concluding this part one school adviser (SA1) seemed to get close to the point by saying that educational management today is more democratic and "softer ways are used in general", but as a consequence there is also a greater confusion; and

"If some years ago the main characteristic [in education] was order, it meant also a certain rigidity; now we experience pluralism of ideas and opinions... and it is difficult to manage it."

Apart from hierarchical changes and their relation to control and bureaucratic issues, fordist and postfordist management principles suggested by this thesis include educational decision making. Two aspects of educational decision making were discussed in the field: the policy making process and every day management. Some of the changes in policy making are presented next.

4.4.4 The creation of educational policies

The policy-making process is only a part of educational decision-making. As Baldridge points out it is not easy to separate major policies from routine decisions: "for issues that seem minor at one point may later prove to be decisive or *vice versa*... Policy decisions are not just any decisions, but instead are those that have major impact, those that mould the organization's future. In short, policies are the 'critical' decisions, not merely the 'routine' ones."[103]

One of the fordist educational management principles related to industrial society was defined earlier in this thesis as a centralization of decision making. The analysis of the respondents' views on what has changed in educational policy making is intended to show whether this aspect of

Slovene education has altered. The analysis will offer evidence on participants' understandings about who makes major decisions in education, and the nature of these decisions. In this part there will also be included, for the first time, comments of pupils.

Some respondents suggested that it is difficult to state who decides about what in the Slovene educational system. The deputy's opinion (D1) about decision-making was that "it is not clearly demarcated. For example the Board of Education was highly autonomous in the area of curriculum development decision-making between 1989 and 1991, but now", he continued, "I think it is the Ministry who wants to play the great role, which they cannot, as they have no levers."[104]

One respondent (SA1) commented: "major decisions are made on the top, in the Ministry and by the National School Council, but they are becoming more open to the suggestions from the field."[105] Another teacher (T1) confirmed the last statement: "Many people from schools are involved e.g. in the preparation of the new matriculation, in writing the 'catalogues of knowledge' [prepared for each subject area]... They do consider us professionals."

Pupils from three different schools explained their views about the educational policy process. One pupil (P2), for example, said that whenever pupils try to complain to and about teachers, the teachers always say that it is not them who are to blame and that everything comes from the top. "Actually, I do not mind who decides. Whomever you ask, they will always

say that there is somebody above him or her to be responsible, and this is a never-ending story." The pupils from two other schools (P4, P5) suggested that the most powerful agent in educational decision-making is the Ministry, followed by the schools. One pupil (P4) argued: "It is obvious [that schools can make certain decisions] because every school is different. In some schools they have got more holidays, and their cultural and sports days are better organized."; and another pupil's view was that it seems that people from Ministry have never worked in schools, because of the expectations and demands they impose through school programmes on pupils. She also thought that teachers should be more influential, and concluded that pupils have not got any say in decision-making outside the school.

"In our educational system it is not easy to distinguish who is actually 'decision-making' and who 'decision-taking'", was the opinion of one headmaster (H1), arguing that decision-taking is concentrated highly in the Ministry and that general strategic policy as well as some kind of institution to cover the decision making process professionally is missing.[106]

The respondents then agreed that the policy making process is still concentrated in the top of educational system, but they also notice slow changes in terms of schools' and teachers' involvement in these processes. The next comments show that participants would like decentralization to be extended and schools to be more included in general social changes; at the same time they support the idea of clear national educational policies. "Schools are important institutions, important for the whole society... and

this kind of institution should have some guidelines. If not, everybody just does what he or she pleases", was one participant's (H2) remark; and a teacher (T1/2) said: "I miss some kind of unity between the top and the schools, some kind of strong concept, which would prevail." Two of the heads (H1, H2) agreed that under the previous Minister[107] education was better organized on the national level, and that now, because educational strategies are missing, they had to develop their own (school) vision for future development. The last statement was confirmed by one adviser (A2) who said: "there are as many concepts at school level as there are schools."[108]

The policy making process as a part of educational decision making therefore has not changed much. Participants consider that it is still too centralized. Implementing educational policies involves major management activities in schools. The nature of this every day decision making in secondary schools, is analyzed in the next section.

4.4.5 The sharing of day to day management responsibilities

The thesis earlier suggested at the level of the theory that postfordist ideal typical EMIS models develop in educational management environments where decision making is decentralized and involve different groups of people. This part of the analysis explores participants' views on the changing roles of headmasters, teachers, pupils, parents and the wider community in managing schools.

The role of the heads has changed in the sense, said one adviser (A4), that presently they have more responsibility and are being accountable for everything which is good or bad and is happening in the schools. A teacher (T1/2) said that because "there is anarchy on the top... it is good that heads have got more competence." For another respondent (H1) the most important roles headmasters play in schools today over leadership and school policy are "a long and a short term one - to enable anyone to know and to contribute [to the development of the school], from those who head it, to the staff, pupils and parents." Heads have then gained more autonomy in their everyday management of schools and are also more responsible for involving others in this process. But not all follow these possibilities.

Exploring the changes in the role of the teachers in every day management one adviser (A2) thought that some schools are still very autocratic and orthodox: "It depends on a headmaster, and above all on teachers... Changes occur only in schools where there is a group of people behind [it], but very rare are the schools where the majority would be involved in decision making... The initiatives from outside are necessary, but there are not many", he concluded. The differences from the management in the previous system were explained by one participant (T1/4: "In the old system of self-management... we [teachers] made decisions together about everything in our assembly... now the head has more competence and our role is more a consultative one". The role of teachers in every day decision making has, according a this last view, diminished. That does not automatically mean that this is the same in every school. Schools, as also the following responses show, do differ quite a lot.

Pupils also explained their involvement in school management. In one school, pupils (P1) said: "We have got our own school parliament... there are many things we can decide upon, at least we try to negotiate about, like school trips, dates of assessments and tests. We can even change the teacher... if we can agree as a whole class it is O.K., it is easy to go ahead... In other schools it is not so democratic. What we cannot influence much is the content we learn, but this is because of the next year's matriculation." But pupils (P4) would like to influence the programme more, especially those areas they are more interested in; and pupils (P2) from another school agreed that there have been only minor opportunities, and that there has been very little encouragement, to influence the learning content and methods. They said that pupils can comment on marks, but this does not mean that the teacher would consider their opinion. Pupils from the same school agreed that: "the atmosphere in the school is democratic, but this is probably due to the fact that we are a small school. We can talk to the teachers, and they listen to you, you just do not feel like a number... Maybe we could get more involved if we would have more knowledge, more experience, and above all more time."

On the part of the school staff there have been different approaches to getting pupils more involved in school developments. The headmaster (H3) thought that it is important to talk a lot with pupils. In their school they try to encourage pupils activities, like the school newsletter.... but they also expect responsible behaviour from the part of the children, like looking after the school equipment. Two other heads (H4, H5) once a month, or when necessary, make themselves available for different discussions with

pupils. This is the time when pupils can ask all kinds of questions and give suggestions.[109] The involvement of pupils in school decision making once again depends on the individual school, and especially the headmaster.

The involvement of parents and the wider community in school management also varies from school to school. Formally, parents and community representatives are part of every School Council, which is the main decision making body in the school. One headmaster (H5) explained: "In our School Council there are 15 members, including 3 parents, 3 pupils, and 7 staff members. Others are representing the school founder [the community]... we invest a lot of effort to get 'proper' parents, I mean people with some academic and professional background. They do come to the meetings and they are very helpful in bringing the parents' perspective into decisions we make. And this is not the only way they can contribute - there are three times a year parents' meetings with teachers - class tutors, to discuss class and individual problems and developments." The feeling of the other head (H1) was that "in some schools parents contribute a lot and more and more their voice is heard. In our school this is so, because we have got selected children, with influential parents, intellectual, wealthy people, with some power in the society."

A teacher (T3/3) reported that in their school they organize regular meetings with parents and have so called 'consulting hours'. Beside these they also prepare lectures for parents, where parents can get more knowledge and information about current educational issues. The lectures represent for parents another opportunity to ask questions and express their

views.

Pupils (P2) too, recognized that parents' involvement is becoming more important and that there are more meetings with parents and school staff every year to discuss their problems. But pupils also explained that parents do differ, and that some are quite concerned about what is going on in school and some are less concerned.

The involvement of the local community was defined by one teacher (T/2): "it is important to develop close links with the local community... the teacher is accountable to this community - in a very nonformal but very important way", and she added that sometimes people are so narrow-minded, that building relations with community and parents means a kind of a battle every day. Another respondent (H4) was also very satisfied with the relations with the community and the firms in their professional area, be it in organizing 'practical work' [*praksa*] for pupils, or helping the school when they need material or other support, like consultancy, solving problems, giving ideas, and so on.[110]

For the majority of respondents there has been a noticeable improvement in parents' involvement in school management, and it was noted that lack of interest and time prevent them from being included more. If in the majority of schools parents have gained possibilities to influence school developments, this for the participants was not so in the case of advisers[111]. One adviser (A2) pointed out: "The advisers cannot decide about anything, be it in schools or on higher levels, where they [people in policy and major

decision making posts] know even less about what is happening in schools than we advisers do"; and another adviser (A3) agreed with the previous opinion by saying that advisers are not involved in school management, and that they just offer services to schools.[112] The overall decision making process seems like a policy of "olympic circles", concluded the next adviser (A2), "just that the contacts between circles are even smaller... If for example the red and the yellow circle are the most apart and they represent the minister and the pupil, and there are others in between... which are selecting... the whole thing becomes watery."

In this part of the analysis and interpretation of the fieldwork the emphasis was on educational management changes. Respondents' views in Slovenia were used against the propositions about fordist and postfordist educational management principles created in the theoretical part. The final conclusions on the match between the theoretical suggestions and empirical findings will be presented later along with the findings from England. The analysis in the following part of the chapter focuses on respondents' views on EMIS developments.

4.5 Fieldwork analysis of educational management information systems

This thesis argued earlier that educational management information systems play an important role in the educational management mosaic. It was claimed that EMIS links together people, organisations and information

through the means of communication. This thesis also proposed that each EMIS consists of several groups of elements which, viewed through the social developments of industrial and postindustrial society, could be incorporated in two ideal typical EMIS models. The following analysis of the fieldwork on EMIS is organized to enable a comparison between theoretical propositions and the views from the field.

This part of the chapter then focuses on participants' understandings of one specific aspect of educational management: the information system. Responses are organized and interpreted through the same four main headings as suggested in the ideal typical EMIS models: purposes, tasks, information categories, and management principles built into information system. Where responses were available, each category shows former and present participants' experiences with EMIS, and also some of their suggestions.

4.5.1 Participants' understandings of EMIS purposes

Within the ideal typical EMIS models several purposes were suggested. In a fordist EMIS, for example, the main purposes are supporting centrally decided educational policies and controlling their implementation; and also providing information on specific aspects of efficiency. On the other hand, it was suggested that the postfordist EMIS model means providing access to information for all the parts of educational system, supporting the monitoring process, and making a contribution to educational quality

development. In Slovenia, as the respondents' opinions show, the purposes of EMIS have changed a lot in the last few years. Respondents' opinions should provide at least a partial answer to the question: Do the EMIS purposes in Slovenia correspond to a fordist or to a postfordist EMIS model?

Some of the general opinions on information system developments in Slovene education were that EMIS shows "incredible changes... looking just a couple of years ago, you couldn't get any formal information... while today we could talk about the flood of all kinds of information which can be found in different publications, or through teacher training at home and in other countries", explained one teacher (T1/2). Another teacher (T1/5) said similarly: "today we get more and more information."

One headmaster (H2) was not sure if he gets more information today than before, but suggests it is of a different kind. "Some years ago", he explained, "we were receiving a lot more circular letters from the minister... about the things decided on the national level" than they do today.

A school adviser (SA1) commented: "now the information is easily accessible by a larger group of people. Some two to three years ago we just waited for it, because we knew that they will send to us all the information we needed from the Ministry; and you just mediated it forward." For the same respondent this kind of patronizing relationship in informing schools has disappeared and now "everything is public. It is publicized in papers... but you must be alert and follow what is in the papers... this is a new kind

of responsibility for us, to find and to follow the information." A teacher (T2/5) from another school was of the same opinion: "Before we had a comfortable life... everything came to us: textbooks, programmes,... everything was clear... [Today] the major problem is the speed of information... there is a greater need to get the information in time. That is why we must search, seek, follow, and listen much more." She added that education too, has been caught by the Western type of free-market pace.

For one adviser (A1) the information system has changed because "the whole space has opened and we seek our new identity in the political, economic, and professional sense." He also pointed out that the new information system should bring even more information about what is happening in other countries: "In our profession comparisons are necessary... in developing the curriculum... we need a lot of comparative studies... it is impossible just to copy from other countries; this information is vital to argue about what we are developing."

Another adviser (A4) explained that the information system does not change quickly because: "it is politically charged... politicians create opportunities to gain information and to keep it."[113]

Control was an important issue in the previous EMIS. One teacher (T2/3) felt a lot of pressure when filling in all the forms and writing the reports for the Ministry. "Everything had to be in place... we feared control from the outside." Almost the same was the view of one school adviser (SA2) explaining that they had to collect thousands of data and fill in the forms,

and they had to be very careful not to forget something. They never received any feedback from all this work. The same adviser was also not sure that the long analyses and school reports they had to submit every year, were "ever read by someone." The present collection of information from the Ministry in schools is still performing control functions, was the opinion of the deputy head (D1).

Selection of information that was passed to schools and control over schools were two main aims of the information system until some years ago, said a school adviser (SA2) and one teacher (T2/4). "On the one hand this [selection of information] was an advantage, it was very comfortable; on the other there was much important information, which they never considered communicating", said the school adviser; and the teacher explained that the previous information system "offered information only to the privileged and the people with power... who then communicated or not this information... or made the wrong selection... Now more information, for example, on teachers' courses and developments in other countries, comes directly to the teachers." And a previous control, exhibited by the inspectors' collection of information in schools, had for her been replaced by the headmasters now monitoring classwork through class observations, different questionnaires, and meetings with subject area groups.

Advisers on the Ministry level are mostly interested in information that shows the school as a whole, said one adviser (A3). The majority of the information they get directly from heads and from other advisers. In order to collect, analyze, and communicate information in a systematic way, they

have started to develop different instruments to monitor and evaluate teachers' work. Another adviser (A1) emphasized that a major step in information exchange and development was represented by workshops, which bring together academics, highly qualified professionals and teachers. For him it is necessary to exchange theoretical and practical experiences and bring to the centre of discussion children and not just programmes and material conditions.

In the purposes of the two ideal typical EMIS models it was suggested that the information systems variously support efficiency and quality of schooling. Participants responses were much more oriented towards their views of what quality and efficiency in education mean, and much less evidence has been generated about how actually information systems contribute to efficiency and quality. One teacher (T1), for example, explained that efficiency and quality for her are two different terms. "The official politics is more interested in efficiency than a quality... quality is more the domain of us who work with young people... quality does not mean how much knowledge has been acquired, but how well they [the pupils] can make use of the literature, in what way they work, how do they solve problems, etc.", and she added that the new external examinations are intended to measure efficiency and quality of schools. A teacher (TD 2/3) from another school agreed that a great step toward quality development is the introduction of the matriculation; and another teacher (T3/5) said: " Today we definitely lean towards quality and this is measurable quality... with external examinations... you should see and compare the work in an ordinary class and one preparing for the matriculation[114], and you could

immediately feel what is quality."[115]

For one headmaster (H1) quality is based on efficiency. Efficiency for him means how many children finish a certain educational level, and quality can be seen through competitions, research work, and other creative activities young people do.

One teacher (T2/2) thought that there is a great disparity "between the official requirements... which are efficiency oriented and the schools as they are. We have to get out the best out of every pupil and not just stick to the prescribed percentages, which still exist." For her this is because the efficiency oriented marking system[116] has been in place for so long, that it is difficult to change it.

At least 12 other respondents expressed today's greater need for the development of the quality of education. One of the typical responses was that everybody, teachers, the Ministry, parents, and pupils, are becoming more aware of the difference between quantity and quality of acquired knowledge.[117]

As already mentioned, the majority of the respondents' answers were more concerned with the meaning of quality and efficiency and less with their connection to the information system. One of the advisers (A2) commenting on this last point said: "Both [quality and efficiency] are important to be supported by the EMIS... But we would not have enough time for quality... we still have to deal daily with problems like pens, compatible

programmes, the right and left signer, and so on... all time and energy consuming things."[118]

4.5.2 Main EMIS tasks that are or should be performed

The next group of EMIS elements analyzed are the tasks. The fieldwork analysis first focuses on respondents' views of how and by whom information system needs and objectives are defined. How this task is performed was explained by one school adviser (SA2): "In developing the curriculum and programmes a lot of discussion is organized between teachers, school advisers, advisers and some people from the Universities." He continued: "The ideas and needs are collected and taken into consideration by project bearers."

Different seminars and workshops organized by the Board of Education were for one teacher (T2/4) an unique opportunity for teachers to explain what they need in terms of information. Some of it they get directly and some is published. Their needs are better considered than they were before. A teacher (T3/3) from another school said that for her the most important is information related to the vocational subject she teaches. The best way to get this information is to spread the request among the colleagues of the same subject. One head (H5) said: "I always try to get the information related to long term strategies like finance, contents and organization in education... but also about politics and economy in general." She continued that this information is vital for school management but it is not

automatically provided; they have to find it by themselves.

Two respondents felt quite negative about how the needs and objectives of information system are set today. One deputy head (D1) was sure that a lot of information that has been collected on 'higher levels'[119] he could not get. This is especially true for the "information he does not know about at all but would be of concern" to him. For him this was the same as before. An adviser (A1) suggested that "On the one hand the information system should be clarified 'on the top', but this alone is not enough. Somebody should listen to the people 'down the system' and then build their needs into the system... At the moment the whole system does not seem to be very constructive and consistent."

The next EMIS task discussed with the participants was data collection and analysis. Respondents expressed the view that the major official way of data collection has from always been through different statistical forms of the Ministry of Education. Apart from filling in the forms with quantitative data, annual reports had to be written until recently. "Before it was even worse," said the school adviser (SA1) "we had to write the so called 'analysis of efficiency' every year, where the most important thing was that they had to be long enough and with all the details requested... We had to collect thousands of data, calculate them and fill them in... This was always a great and an unnecessary burden for us."[120]

Six respondents (D1, T2/2, SA1, D4, TD1/3, T1) complained almost with the same words that today they have to fill a lot of statistical forms for the

Ministry, but they never get any feedback. All of them also agreed that feedback information should be available to the public. One deputy headmaster (D1) added: "probably it [the statistical information] is of no use for those who collect it as well... they do not use that information. It is a routine, developed from a good idea, but collapsed in practice." He also explained some of the weakest points of these forms: " they are such that you have to fill in three times the same data... and they are statistical/numerical forms only," not dealing with the real teaching process at all.[121]

In many cases schools have been developing their own information gathering projects. One headmaster (H5), for example, stated: "Information we exchange [with one European organization] is vital for the research we do in our school."

In terms of quantitative data collection it was indicated that numbers are still a major evaluative form of students' progress.[122] As the headmaster (H2) said: "the school without marks? This is not possible... teachers would throw me out of the school. The mark is an important issue, it is a 'weapon' with which you control the pupils." And one teacher (T2/2) admitted: "In a way we are obsessed with marking... even pupils are so used to it that when we have done a survey they would not go for anything else."

The next EMIS task, the storage of information, relates to the sources of the information system. For three teachers (T1/4, T2/4, T3/3) the main sources of information are the school heads and the Board of Education; and one

of them (T1/4) said that the headmaster not only tries to inform them but also transmits their needs to other sources. He was sure that in their school they have been more informed that in other schools mostly because their headmaster has so many connections.

A school adviser (SA1), for example, gets her information from the "Board of Education, the Ministry, the National Examination Centre, the Centre for University Development, and different advisory institutions." For one teacher (T1) "Information comes from the Board to the school"; and for another teacher (TD1/3) the main sources also seem to be the Board and the Ministry, but if she needs more, she phones around.[123]

For one headmaster (H4) the main sources are the Board, the Ministry, the Chamber of Commerce, and the contacts he established by himself. He also considered the European Association of the school directors in their professional area of much importance for spreading new ideas all over the Europe.

The main sources of information are for one teacher (T3/5) personal contacts and the literature. And for another teacher (T1/2) these are the headmaster, the mass media and the Union. The last respondent emphasized: "Another good source of information is our Union and through the Union representative in the school we could comment and ask a lot... of course the Union is a new thing, it is still developing, and it has not got the right power yet."

One teacher (T1/5) was quite self-critical: "A lot of information comes to us, but we are maybe not properly organized or we have not got enough time to systemize this information and save it before we lose it." She does not expect the system to organize all the information. If she needs some special information her best source is the head.

A deputy head (D1) pointed out another problem. He said that he knows more or less all about the possible sources of information. He knew where to get which information and he also considered access not to be a problem. "The problem is that there is not enough information, because people in charge in certain areas just have not got it... An order is missing... not just in the Ministry of Education, but within other Ministries too. For example within the Ministry of Work you cannot get proper information about workers' rights. Once we had a problem and I suggested the solution and it was accepted.[124]"

Pupils (P3) are mostly interested in information related to the choice of the right school and programme. The majority of this information they get in their own primary and secondary schools, from the headmaster, and from their peers.

The storage of information related to education is far of being centralized but it is also far of being settled. Respondents mentioned two reasons for information not being found: the lack of information in general, and bad organization of existing information. Some of the sources mentioned by the participants in this part of the analysis are listed in the next table.

Table 4.2: Main information sources identified by respondents

	SA 1	TD 1/3	T 1	T 2/4	H 4	T 1/5	D 1	T 1/2	T 3/5	P 3
Board of Education	*	*	*	*	*		*			
Ministry of Education	*	*			*		*			
Centre of University Development	*						*			
Headmasters						*	*	*		*
Other institutions	*				*		*	*		*
Personal contacts		*			*		*		*	*
Mass media							*	*	*	

Information dissemination and communication seems to be an important EMIS task for the majority of respondents. More that 20 of them gave an answer that provides evidence in exploring this task. The ways in which data are collected, analyzed, and information then stored has major impact on how this information is disseminated and communicated. Here the analysis concentrates on physical access to information and on 'communication space': the frequency and the variety of contacts.

"As a teacher before you could not get the information you needed for teaching and it was necessary for the political change to happen so that information space has opened", said one teacher (T3/5) and added that this was not because the information was closed, but it was just not available. "Teachers did not know what was going on in other countries... while today there are plenty of this kind of information", she concluded. Another

teacher (TD1/3) said: "There is more information today but less personal contact... there are fewer meetings in schools and everything is on notice boards." For one teacher (T1) information does not seem to be closed; if she were to need something she was sure she can get. And a school adviser (SA1) agreed that today there is no control over information but "maybe all these institutions are not connected in a proper way... sometimes you must call three or more institutions for a tiny thing ... coordination is missing."

The general impression of the deputy (D1) was that "communication of information between the Ministry and schools is worse than before... e.g. sometimes I can read about the new regulations in papers before they come as circular letters in schools. I know that we in schools are not satisfied with exchange of information and I am sure that the Board and the Ministry are not satisfied too... There are many suggestions, there is all the technology, just someone should organize all this."

Communication between teachers and the Board of Education depends very much on individual advisers. Two teachers (T2/2, TD1/3) complained that since there is no adviser in their subject area this important link is lost[125]; and one teacher (T1/3) said that now he communicates only with the Faculty in charge of teachers' seminars but she is not happy at all: "They [the Faculty] are only concerned to get the seminars done, and they do not care about the real needs of teachers... and they are so expensive these seminars and you just get a few papers."

Teachers have not got direct communication with the Ministry,

communication mostly goes between teachers, with the headmaster, and one foreign school, said one teacher (T1/4); and another (T2/4) was quite pleased explaining that in their "subject area information has became better organized and communicated, but still a lot has to be done; our 'horizons' are still very narrow."

One of the teachers (T1/2) pointed out that good communication has been developed recently with the Teachers' Union.

A headmaster (H3) thought that he deals with information all the time. Before a lot of literature was coming constantly from the Board and the Ministry... and the things were in a way settled... Today the communication with the Ministry is not good, does not work... they do not appreciate our initiatives;". Now they try to get information by themselves from other different sources. He mentioned the Ministry of Agriculture, the Chamber of Commerce, and the Chamber of Crafts. As a school they also communicate with other similar schools and with local authorities. The communication they are also not very happy about is the one with parents.

One headmaster's (H4) experience in communicating with the Board of Education is very positive. Whenever he needed some information or explanation they have always helped. On the other hand he himself has a lot of information and he exchanges it with them and also with other schools. "The only information we are not so willing to share is that related to the management and organization issues in schools. I must say that there is a little bit of jealousy between heads too; everybody prefers to keep the

managerial problems and solutions for itself... maybe this is a sort of competitive relationship, we have seen this in other countries too."

In another headmaster's (H5) opinion communicating with a European organization is of vital importance for their school. "Now we get information from all areas of school life; management, finance, human resources... this is a systematic, constant communication. We think that it is important to compare us with others and so to improve in general."

Pupils (P1) in one of the selected schools said: "Communication with the headmaster is very easy, even bypassing the class tutor; you just go to his office and ask him for the appointment... you can discuss with him about everything." They also communicate well with the class tutor be it on special dedicated time, so called class hours, or whenever the needs occurs.[126]

Pupils from another school (P5) listed different ways in which they communicate: through the class president who represents them in School Council, then through the school radio, the newsletter, the National Association of Pupils, the notice board, the class tutor and the deputy head. The same pupils did not comment on quality of this communication.

One school adviser (SA2) seems to be much concerned about pupils being better informed: "We try to teach children to be responsible for themselves in life, not to be protected, because in the market outside they will have to fight for their own place... they will have to search for the information by

themselves and know how to sell their knowledge and skills."[127]

The adviser (A2) from the Board of Education explained her experiences in communication: "Information communication goes in hundreds of different ways... for example we are all members of many interinstitutional committees, which are mostly there to show that we are alive and that we function. But having more information does not automatically mean more decision making power, at least not formally. Nonformally the power of information is the power to decide and this is because if you know what is happening, you know also how to react in different occasions." She has developed very good links with schools and she admitted: "I can give to the teachers a lot of useful information; but they, the teachers are even richer source of information than they would recognize."

And one adviser (A3) emphasized the efforts Board of Education now undertakes to improve informing the schools: "We publish a lot more than before and this means a lot more information for schools... there [in these publications] are also names of contact persons for the different needs people have."

The communication has therefore become richer than it was ever before. How far the developments in this task and the others analyzed before correspond to the two ideal typical EMIS models, will be discussed in detail later. The next group of EMIS elements explored in the field were the information collection categories.

4.5.3 EMIS categories discussed in field

The analysis of respondents' views about the availability of different categories of information within EMIS should show how well the participants' information needs are covered and where are the major gaps in the present information system. The findings will be later, and in detail, compared with the propositions developed in the two ideal typical EMIS models. The analysis starts with the first category: information related to the programmes and curriculum.

Eight participants (SA1, T2/2, H2, TD1/3, D1, H4, H5, P1) were convinced that this area of information is better covered than it was before and that all major information can be found in different publications produced by the Board of Education. "At the moment, we generally know more about programmes and curriculum than before" explained one school adviser (SA1) and added that because programmes are so open, many different practices have been developed about which they do not get any information. The last argument was put forward by four other respondents.[128]

One group of pupils (P1) held the opinion that they are not interested in getting more information about curriculum and programmes because they have not enough time; but the pupils (P2) from another school said that the information they have received in publications specially created for them was not good enough when they were choosing the secondary school. They had to find more information by themselves from the teachers and from

their older peers.

Three advisers from the Board of Education commented: "Availability of information [about curriculum] depends on subject area... some are much more advanced - they have developed objectives, handbooks, projects." said one adviser (A1); another adviser (A2) pointed out that the problem of being consistent in the information system lies in the interpretation of terms 'curriculum' and 'programmes', "as we use one term for different things,"; and one adviser (A4) was sure that the information system in this area does not follow the actual changes saying: "even if you bring all the people within the Board of Education together and try to do the latest list of programmes and contents for all secondary schools, we are not able to do so... we should first build a consistent information system within a house."[129]

The second EMIS category explored in field was the information about students, educational staff and educational institutions. Much of the information in this area is, in relation to the theoretical discussion, expected to be of 'quantitative' nature and is considered to be easily collectable and also widely available. According to the participants' views this is not always the case in Slovenia.

One deputy head (D1) said: "All these data are the same as before. Before there was nothing, and now it is nothing... Collection is done, but to get this information is almost impossible." He gets some information because he knows some people who have it, but he also admitted that "the data are

quite inaccurate... for example I found some people in these data who have been dead for four years." A school adviser (SA1) thought that data about institutions are available; but the data about the staff, which she needs, she gets from her private connections. The major problem for her is the data related to pupils. The new legislation about the protection of personal data means that parents or students over the age of 18 must give permission for data collection.

How important is the information about the pupils and their social background for teachers and how complicated it has became today to collect it was emphasized by several teachers (T1, T1/2, TD2/3, T3/3). One teacher (T1), for example complained: "It is important for us teachers to know the pupils' social background. If it comes to some problems, you know better how to react to them. Now it depends on how much parents trust the school."[130]

Three headmasters (H1, H2, H5) considered this category of the information system not to be organized properly. One headmaster's opinion was that having just some numbers does not mean much to him. What he misses today is the information about pupils that should follow their vertical progress, from primary school to the university and even to work. Another head was sure that the information they get about the institutions [about staff and the addresses] is not accurate and it is also not easily accessible. And the third headmaster said that in their school they are used to collect the data about their pupils on their own for years.[131]

At the Ministry level of the educational system, three advisers commented on the availability of this kind of information. One adviser (A1) said: "All this information should be available, but at the moment I am not sure where to get it... I know that somewhere in the Ministry they are developing a new information system, but at the moment it is impossible even to get the right number of primary schools or pupils... The old reports we used to do once have gone, and now somebody else collects this information... The whole system is missing, it is not transparent... Each year all the data should be published in a bulletin, and some kind of office or department should be in charge of providing this information to the public."

"This is the part of the information system we have the worst experiences with", commented another adviser (A2) explaining that "until today we could not get even the simplest thing like an accurate list of teachers by subject, and addresses of institutions. I know that there is, for salary purposes, a list of all teachers, and I cannot see any reason why we should not get this information. We need staff data to prepare seminars for teachers, and we need to know how many new teachers there are"; and one adviser (A4) said: "The number of pupils? Nobody knows exactly how many are there... We had to develop our own system of data collection and communication, which is computer based. We here do a programme and then we communicate with schools on discs... The data about staff exist, but you must spent enormous amounts of time before you get anything... and even then their programmes are not compatible with ours and so on... The fact is that every school is well equipped with computers and the same

with us. So there is no reason why we could not develop a proper network."

The third EMIS category, examined through the interviews, was that of the students/pupils achievement and the criteria of achievement. This area was commented on by eleven participants and all of them expressed the view in one or another way that this kind of information is generally not available for secondary education. One of the reasons, why this is so, was for one headmaster (H1) that "we are still afraid to rank the schools. Firstly, people from schools resist this kind of information, because it is something new... and secondly, I do not see any institution or office which would be able to do that at the moment."[132]

One deputy head (D1) and one headmaster (H2) were sure that this kind of information is not available and the same head also added that what is missing are clear educational standards. For him the existing criteria for the matriculation are not clear. "We do not know what kind of marking system will be in place. What we know are only the percentages[133]... the marks are political."

Two teachers (T1, T2/3) thought that nobody out of schools collects the information about the pupils' progress except for the experimental matriculation and they really hope to get some feedback. In some subject area collecting this kind of information has started: teachers of similar schools collaborate in preparing the exam tests, which they then analyze by themselves and publish. In the last two years there are also some

information available from the primary school exams and as mentioned they look forward to some feedback from the experimental matriculation.

Another two teachers (T1/2, T3/3) were of the same opinion that this area of information is of vital importance for teachers, as every teacher is interested in the progress pupils have made before coming to and after leaving a secondary school. One teacher (T1/2) said that getting this information "should be our right... to see how successful we are in comparison with other schools. But now the data are protected and you feel that what you should know as a professional is hidden from you." The other teacher (T3/3) commented: "The fact is that some information exists in higher education institutions, but the problem is how to get this information about our pupils into the school... while the information from the primary school comes with children... but the content very much depends on who has written the report... some write shortly and include what we really need to know and some just fill in empty words." The criteria are obviously not set. Some schools are trying to develop their own progress criteria, which are mostly intended to be a positive motivation for pupils (SA1).

The advisers from the Board of Education are supposed to be at the centre of developing new standards in primary and secondary education. Their comments are important to highlight the current problems and trends in this information area. One adviser (A1) explained: "In our curriculum area we have developed criteria of knowledge on two levels: a basic and an optimal one. The basic was tested in schools... and starts from the first

grade in primary school up to the end of secondary, because the human being is 'continuous' and as he or she grows the needs are changing... These are the standards teachers are supposed to follow... In other subject areas? Some have done the same and some still have not done anything... a lot of inconsistency is present... Another problem is assessment. If the curriculum is built in phases, starting from the bottom and not on the top, every teacher would know what was done before... so the system is built and then you can follow the progress."

A second adviser's (A2) view was that "at the moment, in the way we work now, we do not need this kind of information at all. The marking system we use in our schools means a lot of testing, a lot of paper work... but in reality we do not follow the progress. If the child has got one subject marked 5 [excellent] for eight years in primary school, this does not tell us in what areas she or he has been good and what else should be emphasized in future... the quality of assessment is questionable... The clear criteria are not there. Even with the new matriculation I am quite sceptical, because the criteria are not oriented towards improvement of quality, but are selection oriented. It means how many places are at the University level. And the University is only interested in the final number of points and the enrolment numbers. Assessment is an instrument for selection."

Not much different from previous comments was also the third adviser's (A4) view: "This topic makes me angry... nothing has been done... there is no theoretical background and the elements are not clear. In schools so called 'personal records' exist and every teacher writes in whatever they

want. They are not doing the job of a permanent follow up of pupils' progress... Of course the whole process is quite complex as one should take into consideration personal characteristics, social background, parents' involvement and other things. All this should be included. Children who leave the primary school take with them these records, but it is not at all clear of what should they consist."

The fourth category of information system covers evaluation and other research in education. For a headmaster (H4): "It is definitely better than it was before; there is much more information available but we just do not use it enough... mostly because of the lack of time." Another headmaster (H5) was sure that he has a good overview of information in this area and stressed that the problem is not in information; "it is just because not enough evaluation and research is done"; while one of the headmasters (H2) pointed out that not all of the information about the research in education comes to schools; the communication between schools and researchers should be, for him, different, more direct. "They [the researchers] should present what they do and get some opinions from us", he suggested.

A headmaster (H1) from another school agreed with those who think that too little research is done in Slovene education: "There are only some scattered examples [of research] done mostly by University institutes, if by chance some individual has chosen something in education... What I miss the most is the evaluation of all kinds of projects, schools undertake today. Evaluation should be built into a system... if the state gives the green light

for projects, they should also assure overall evaluation", which for him is not the case today.[134]

A school adviser (SA1) also commented on a lack of appropriate evaluation: "There is a flood of projects in implementing innovations, which are not prepared properly; they are mostly taken from some other environment and are culturally not adapted to us. And it is impossible to evaluate all this at least as it should be... each school should develop its own internal evaluation, but as this is not an official requirement, very rare are the schools that do it."

Teachers too, who commented on this category of the information system, agreed that not enough information is available. For one teacher (T1/2) the main reason is that in their subject area there are not enough capable professionals at the University level who could directly evaluate major projects and also train teachers for research; the teachers must learn everything by themselves. A second teacher (T2/2) said that all of the research work she knew about always took so long that everybody forgot about it; and no feedback was ever available.

That not much is going on in research and evaluation related to education, and that this is the main reason why information does not exist, was also the opinion of two teachers (T2/3, T2/4) from different schools. Another teacher (T3/3) was sure that the information schools receive through journals and papers is not much related to their work. She saw two main reasons for this: firstly, the researches are not connected to the school's real

needs; and secondly, the way that results are presented is not adequate - reports are usually too long, or the language is too sophisticated, or both. And one teacher (T1/5) pointed out that what is very much missing is comparative information between schools at home and outside the country.

"There are none [researches in education]. There are only projects in the form of master or doctoral thesis," was the explanation of one adviser (A2), "and these projects are not linked. Their purpose is different, it is not primarily to be used for educational development, their first 'user' is the individual... the feedback is not available and in general we do not publish enough. Ignorance and information barriers are still strong; and there is no proper support from above [top decision makers in education] to do these things differently."

The remaining two categories of information system analysis cover the information about finance and legal issues in education. The majority of participants' responses about finance information were connected to the new financial system implemented in the last two years.

Two advisers (A2, A4) from the Ministry explained: "There is enough money for everything, just nobody really knows what is happening with it." (A2); "There is a lot of money available, but who really knows what is happening? Probably only the minister... and the teachers about their salaries. The information system in this area is very weak." (A4). One deputy head (D1) commented that financial matters are not under control in the sense that nobody would know exactly where the money goes and

for what.

One headmaster (H1) considered that finance in Slovene education is totally disorganized. "Before it was better; a lot more was invested during so called 'oriented education' in laboratories, special classrooms, new schools, equipment... The new system seems to be more oriented towards improving the staff salary system, based on the promotion scale, and which at the moment seems to be collapsing - money has gone and people in schools are not satisfied with their salaries in comparison to graduates in other sectors. They have completely forgotten about other expenses in schools... For two years I'm not sure what the money we are getting in school's is intended for and on what basis it is calculated... and there is no control in this area." He explained the new policy and added: "And if there is no system [of financing], the information cannot be available."

One school adviser (SA2) said: "As financing is now centralized, local authorities have not got much say, and in general we know less. The headmasters get more information, or I would say they search for more information."

Teachers are informed about their salaries and this is more or less all that they know about the finance in education. One teacher's (T3/3) view was: "Information about salaries is available to everyone... it is just that we in schools cannot influence any aspect of educational finance. The depreciation funds from before have been abolished and the schools are deteriorating." Another teacher (T2/2) commented that teachers do not know much about

finance; but they do know if they need some equipment or something else for schools they must nag and make a great fuss and the money could be found. One teacher's (T1) view was that most of the information about educational financing she gets from the Teachers Union - mostly about salaries; other information came from newspapers and TV. She also said that she does not want to know more, because this would only upset her.

The problem with the information about legislation is similar to that about finance. Because the legislation for certain areas of education does not exist or it is out of date, the information cannot be satisfactory obtained. Some of the respondents were quite critical about how legal issues are produced. A school adviser (SA1) said: "The legislation should follow a general conception of education, which we have not got. You cannot write the bill first and then a concept." Another comment from one deputy (D1) was: "Some old legislation is still in place... but is of no use any more... I think this is on purpose, as this costs the Ministry less than the changes would." One headmaster (H1) commented that the legislative changes are not systematic; and one teacher (T3/3) was afraid that the new legislative acts will increase bureaucratic procedures.[135]

One headmaster (H2) and a school adviser (SA2) explained that all information about the current legislation related to education is available through different publications. They keep the publications in school libraries so they are available to pupils as well.

Another head's (H5) views were: "I follow as much as possible what is

changing in legislation, but I have also got a solicitor, whom I call whenever I need to solve some problem, write an answer or a complaint. Otherwise the legislation is out-of-date and even with some new legislative acts - like the Regulations on assessment and marking - the practice is more advanced." A similar comment on legal changes was put forward by one adviser (A4): "It is our practice to legislate what is already happening in education and we are not capable to make a step or two forward. You cannot change laws every day. The most typical example is the regulation concerning the matriculation. It is still not in place and we have already introduced the experimental matriculation; not to mention the International Baccalaureate which has been in practice for five years but is still not included in legislation"; he also added that the Board of Education is in charge of the programmes, somebody else writes the laws and "we do not know what they do, they do not know our work, and the schools are autonomous... and there you are."

The information about legislation was the last information category discussed with respondents. The summary of their responses will be done later in the thesis but a general feeling was that although more information is available there are still many areas where information does not exist. One of the reasons, also put forward by the participants, lies in inappropriate management. Respondents' comments on management principles of the EMIS are analyzed in the subsequent section.

4.5.4 Principles of educational management built into EMIS

The final section of the fieldwork analysis in Slovenia focuses on the management principles of the information system as proposed in the theoretical analysis of the thesis. Earlier this thesis suggested that in a fordist ideal typical EMIS model information systems are centralized, with one way and vertical information flows, and formalized relations between the people involved. The postfordist EMIS, on the other hand, proposes decentralized management of information systems in education with multiple information flows, and a mixture of formal and informal relations between people. This chapter here firstly tests respondents' views about the information flows between the different parts of educational system; secondly, it analyses relations between those who exchange information; and thirdly, the fieldwork analysis explores whether the EMIS in Slovenia is considered by respondents to be mainly centralized or decentralized.

Participants' views showed different combinations of information flows. One respondent's (T1/2) opinion, which could be considered as an example of a vertical one way information flow, was that the headmaster in their school is a main source of information for teachers, "but he is more an 'informator' and less a 'communicator', because we teachers are rarely asked to comment or give feedback on information we get from him... This is probably because he is in the same role in relation to the levels above him and his sources", she added.

The examples of a vertical two way information flows were emphasized by

some participants. Pupils from two schools (P1, P3) described the pupil representation system as a good example of communication. Every class elects a representative for the school parliament, where they discuss different topics, like pupil-teacher relationships, teaching methods, and make decisions about their cultural and sport events. The representatives consult the class and report back regularly. The same pupils were also very satisfied with the mutual communication with the headmasters. Communication with pupils was also emphasized by one headmaster (H5) who considered that it has become more frequent and more nonformal.

One adviser (A3) from the Board of Education pointed out that lately there are no more formal, regular communications with schools, so they have to take advantage of different occasions to keep contact like meetings and discussion groups and they also tend to communicate directly with schools, especially with the heads; and another adviser (A1) said that they rely much on teachers' experience while developing curriculum so they try to communicate with them as much as possible.

There are also some examples of participants' horizontal two way communication. For two teachers (T2/2, T1/5) there is a lot of horizontal communication between teachers (from different schools) of the same subject area. They, for example, prepare the topics and problems ahead of time and when they meet they exchange experiences; there is a lot of good collaboration, discussion, and information. These meetings are mostly organized by the Board of Education. One of these teachers (T2/2) also pointed out that communication with parents is regular and they try to

encourage parents to be more involved in pupils' education.

Another teacher (T2/4) shared the same opinion saying that she communicates a lot with teachers of the same subject in the school especially after school autonomy has increased. But the linkages with some secondary schools are, in her opinion, still weak, "probably because the programmes of schools are so different."[136]

The communication with some heads from other schools was in one headmaster's (H2) opinion very good; for him this is one of the easiest and the quickest ways of getting different information.

One school adviser (SA2) explained that in their school they have developed good communication with school advisers in primary schools, as "it is very important to transmit the right information to the primary school pupils about the choices in secondary education, like programmes and requirements, and match them with pupils' abilities and needs." In order to improve communication they also organize all kinds of events with similar schools in the district and one foreign school.

An example of a horizontal and one way information flow is for one adviser (A4) from the Board of Education the communication between different parts of the Ministry. He also said: "Here, with us, the institutions instead of collaborating, compete. So if you need information from another part of the Ministry, you will not get it... or you will get it with a lot of effort because the minister said so."

There is another important flow of information, which does not fit in any of the mentioned combinations, and this is the flow between schools and parents. It could be one or a two way, more vertical or more horizontal communication. One headmaster's (H5) opinion, for example, was that communication with parents in the last two years has not been as good as it was before. The reason for this "could be found in increased demands on the school and family. It is clear now that the responsibility for education, maturity, and upbringing must be shared. And there is a kind of tension between school and family and the relationship has changed. Before, the prevailing philosophy was that society should take care of a child especially if both parents are employed [which was often the case] and families are aware of their deficiencies today. And school requirements today are higher, especially with the new matriculation. The whole situation is much less sentimental[137]." Formally there are more complaints from the part of parents than before, but nonformally there has been an increase noted in the number of very close relations with parents; this in the participant's opinion shows that parents and school are becoming more aware of the importance of close collaboration.

As theoretically proposed earlier in the thesis, exchange of information can follow more formal official paths or it can be quite nonformal. All respondents use formal and nonformal contacts to get the information they need. When "people from the Ministry need information from us or a suggestion to solve the problem, we are always willing to collaborate - quite nonformally... but one would expect to get something back", said one deputy head (D1); and one headmaster explained: "If I try to sum up where

I get most of my information, I must say that it is through my personal contacts I developed in the last 14 years, and I have them a lot." If he needs something from the Ministry, he does not write a letter because he will not get a reply, or a reply will be in six months, which is too late. He just rings up different people. This for him is not a professional relation but "we only just started to behave more professionally."

One school advisor (SA1) uses both ways and what is positive for her is that there are no limitations to nonformal relations: "We have all the freedom to get as much information as possible", she said and continued: "Within the school the communication is very nonformal. We just ask each other what we need. If larger need occurs we call a meeting... for example, of class tutors, or the whole teaching staff... In schools there is no hiding of information; it can only happen that somebody forgets something." She also mentioned that a lot of grapevine information is coming to schools from outside and that official information is missing (which in the language of this thesis means that there is not enough formal information) or it is not in time.

One teacher (T1/2) commented: "Today we can say that nonformal relations are encouraged. We know that the more we are informed, the easier is our life, and it is easier to get rid of the hierarchy in which we are set."

Another teacher (T2/2) explained that the relations with parents in a small town are much more nonformal than in a large one. She personally knows two thirds of her pupils' parents. And pupils from the same school said:

"Because our town is quite small, our teachers and parents know each other and they communicate a lot."

If the school adviser (SA2) needs some information, she feels that it is much easier just to call, even the Ministry. "Five or six years back if you did not know something, you felt very reluctant to call the same people as today." She also tries to encourage pupils and parents to ask for whatever they need.

For the teacher and deputy (TD2/3) there are many more nonformal contacts than formal. "Through nonofficial contacts we try to push through the system, through the bureaucracy, certain decisions and information." "We teachers of the same vocational subject [but in different schools] are in constant nonformal contact... we feel free to call each other whenever we need some information or have a problem", said one teacher (T3/4). One headmaster (H4) emphasized: "Before, nonformal relations, especially with foreign schools, were not encouraged... while now it is totally open." For one teacher (T3/5) the main source of information is the personal contacts she has.

Another headmaster (H5) emphasized that nonformal communication with school staff, pupils and parents has increased in last few years. Nonformal relationships mean for the same respondent more time to be devoted to personal, individual communication but also increased confidence and greater mutual respect.[138]

On the Ministry level, both formal and nonformal communication, seems to be very limited. "The more we talk about how schools should open to parents and community, and how everything which is done in education should be public information... here at our working place nobody tells you anything, we do not talk at all... there is no programme, no communication... you cannot work at all." complained one adviser (A1); and another (A2) pointed out that formally, for her work, she cannot get any information. "In the working place even that little communication that was in place before has died away. We do not meet regularly, so the systematic communication of information is not there. Only nonformal communication exists... Qualitatively speaking it depends on your personal contacts, your activities and efforts, how many and when do you get information today."

The comments on the formal and nonformal relations between those who communicate in education show various combinations but also point to certain gaps. These will be discussed in more detail when the findings are compared between Slovenia and England and with the theory. There is another management principle that was tested through participants' responses and that is the centralization and decentralization of the information system. One of the teachers (T2/2) explained that the information system is not centralized, because they get the information they need from many different sources. And for one headmaster (H3) information system today cannot be considered centralized; for him it was much more centralized before.[139]

Two teachers emphasized the centralization of information within a school. For one teacher (TD1/3) management of schools in general is more centralized than it was before, "but before we had all the time some kind of meetings and we were more informed about what is going on in and outside the school... now there are only very few meetings."; and one teacher (T1/5) said: "Before we teachers knew everything, today this is not so."[140]

The pupils' (P1) opinion was that "schools get information on what to teach from above, from the Ministry. They get exact number of school days, holidays, sport and cultural days... we think that our school tries to communicate a lot with the Board and the Ministry, but they do not pay enough attention... just listen to their speeches on the TV and it becomes immediately clear to you."

Participants then do not consider that the whole information system is managed centrally, but they gave a lot of evidence that some of its parts are only in the domain of the Ministry. Also, to them, the Ministry should organize this information in such a way that it could be easily accessible and provided in time. A tendency of information centralization is present in schools as well. The main reasons for teachers' feelings of being less informed are that headmasters' competencies have in the last two years increased and that teachers tend to be less involved in every day decision making.

4.6 Conclusion

This chapter was an analysis of the recent social and educational developments in Slovenia. The first part of the chapter showed the major political, economic and educational reforms related to the processes of the abolition of socialism. The second part of the chapter was the analysis of the fieldwork.

Following the same organization of the discussion as in the theoretical part of the thesis, the fieldwork analysis firstly focused on the evidence on educational management changes, and secondly on recent developments in EMIS. The analysis initially was of participants' responses which show what and why has changed in educational management in Slovenia; subsequently, the evidence on changes in relation to fordist and postfordist ideal typical EMIS model was examined. The findings from the fieldwork will in Chapter Six be compared with those from England and with the theoretical suggestions of this thesis. In the next chapter, following the same methodology, English social changes will be discussed and the fieldwork information will be analyzed.

4.7 Notes

1. The field work in Slovenia was conducted in June 1994.

2. Ferfila, B. 'Some Problems of the Newly Emerging States - The Case of Quebec, Baltic and Slovenia'. Nastajanje slovenske državnosti (The rise of the Slovene State). Zbornik referatov; Politološki dnevi Ankaran, 1992, p.16.

3. Ferfila, op.cit.

4. From 1945 until 1991 Slovenia was one of the six republics of Socialist Federative Republic of Yugoslavia. The other five republics were: Bosnia and Hercegovina, Croatia, Macedonia, Montenegro, and Serbia. Both autonomous provinces, Kosovo and Vojvodina, were parts of Serbia.

5. Ferfila, op.cit.

6. Gantar, P. 'Decentralization of administrative and political authority to promote regional economic development: the case of Ljubljana'. In Rondinelli, D. (ed.) Privatization and Economic Reform in Central Europe: The Changing Business Climate. London: Quorum Books, 1994, p.116.

7. Ferfila, op.cit., p.17.

8. Ferfila (op.cit.) explains: "Political relations within the country were influenced by... the autocratic and polycentric etatism on the part of the republics."(p.17)

9. Gantar, op.cit.

10. Ferfila, op.cit.

11. Ferfila, (op.cit.) compares Slovenia and Kosovo, whose populations are almost equal in number, and which at the time had 10 percent of the total population each: "Slovenia generates 18 percent of Yugoslavia's GNP, 21 percent of its industrial production, and 23 percent of its export volume. Its GNP per capita is about USD/ 7.000. Kosovo, by contrast, is responsible for 1.8 percent of GNP and 1.7 percent of Yugoslavia's export volume: GNP per capita in Kosovo is about USD/ 1.000."(p.21)

12. Bibič, A. 'Nekateri vidiki pluralizacije družbe in države na Slovenskem' [Some aspects of the pluralization of society and state

in Slovenia]. Nastajanje slovenske državnosti [The rise of the Slovene state]. Zbornik. Politološki dnevi, Ankaran, 1992.

13. 'Reformers' are considered to be those individuals within the League of Communists who in the late 1980s supported the ideas of political transition to a parliamentary democracy.

14. Keane, for instance, explains that the term 'civil society', separated from the state, has been already well developed in classical and medieval political thought; the same term has been an expression for the domination of the bourgeoisie over the proletariat in seventeenth and eighteenth century in the form of private property, market competition and private rights; while in socialist/communist systems the term means 'anti-party activity'. Although the meanings vary, explains Keane, they all are concerned with the "*political* problem of how, and under which circumstances, state power can be controlled and rendered legitimate."(pp.32-33)

    Keane, J. Democracy and Civil Society: On the Predicaments of European Socialism, the Prospects for Democracy, and the Problem of Controlling Social and Political Power. London: Verso, 1988.

15. Offe, C. Disorganized Capitalism: Contemporary Transformations of Work and Politics. Cambridge: Polity Press, 1985.

16. Keane (op.cit.) writes: "To engage in anti-party politics is to deny the insatiable power-hunger of those who presently govern, to stop them in their tracks, and thereby to put politics in its proper place of securing and enhancing the existence of an independent, pluralist, self-organizing civil society."(p.117)

17. Keane, in Introduction to Offe (op.cit.).

18. Fink Hafner, D. Nova družbena gibanja - subjekti politične inovacije [New social movements - subjects of political innovation]. Znanstvena knjižnica. Ljubljana: Fakulteta za družbene vede, 1992.

19. Fink Hafner, op.cit.

20. Fink Hafner (op.cit.) explains indicators of the modernization of social consciousness as: criticism of the monolithic socialist political system and striving for a pluralist party system; the support of new social movements and civil initiatives of not yet legal political subjects; an orientation towards reform in the economy to replace the dominance of the social property with the plurality of property forms; and the abolition of the socialist system of domination of politics over the economy.

21. Fink Hafner (op.cit) considers postmodern values as: the change in the perception of 'development' in terms of the rejection of the quantitative model; the strengthening of ecologic awareness; tolerance and openness towards different/other cultures; inclinations towards individual freedom and postmodern conceptions of the relations between the individual and the state.

22. Fink Hafner, op.cit.

23. The best known research in this area is the project called 'Slovene public opinion'. This longitudinal study started in the early 1970s in the Faculty of Social Studies, University of Ljubljana.

24. Ribnikar explains: "Social ownership means that behind the permanent sources of funds of enterprises (behind the equity of firms in a market economy) one cannot find any person to whom these funds belong. So one can say that social ownership is defined negatively, as what it is not, rather than positively, as what it is. Looking at the balance sheets of enterprises, one can find creditors behind their debts but nobody can be found behind their permanent sources of funds. We should call it quasi-equity to escape the use of the more dominant but wrong expression 'social capital'."(pp.11-12)

    Ribnikar, I. 'How to abolish social ownership - a soft transition to a market economy'. Privatization: an International Symposium. Papers and Discussions from a Conference in Bled, Slovenia. London: Centre for Research into Communist Economies, 1992.

25. Fink Hafner, op.cit.

26. Statistični letopisi SR Slovenije 1977-1991 [Statistical Yearbooks of the SR of Slovenia].

27. Fink Hafner, op.cit.

28. Bibič, op.cit.

29. Habermas, J. 'New Social Movements'. Telos. No.49, 1981.

30. Bell, D. The coming of Post-Industrial Society. New York: Basic Books, 1973.

31. This thesis pointed out the similarities of economic and specifically management principles within industrial and postindustrial societies of capitalist or socialist origin in Chapter Two.

32. Fink Hafner, (op.cit.) quoting Bahro.

Bahro, R. Alternativa: Kritika realnog socializma [The Alternative: Critique of real-socialism]. Zagreb: Globus, 1981.

33. Bibič, op.cit.

34. Jambrek, P. and Toš, P. Socialno-strukturne, nacionalno-teritorialne in osebnostne determinante političnih kultur Jugoslavije [Socio-structural, national-territorial and individual determinations of political cultures of Yugoslavia]. Bilten RI FSPN, CJM; Ljubljana, 1989.

Also: Fink Hafner, op.cit.

35. Fink Hafner, op.cit.

36. ibid.

37. ibid.

38. ibid.

39. Jambrek and Toš, op.cit.

40. Fink Hafner, op.cit., p.84.

The data represent the percentage of the interviewed and are organized on a continuum.

41. Fink Hafner, op.cit.

42. The reformist part of the former League of Communists of the Republic of Slovenia formed a Party of Social Renewal (SDP).

43. Ferfila, op.cit., p.24.

44. Mencinger, J. 'Decentralised versus centralised privatization: Creation of the starting conditions'. Privatization: an International Symposium. Papers and Discussions from a Conference in Bled, Slovenia. London: Centre for Research into Communist Economies, 1992, p.26.

45. ibid.

46. Ferfila, op.cit., p.27.

47. Mencinger, op.cit., p.29.

48. The war, though a major historical and very serious event, is not of immediate concern here.

49. ibid.

50. Kumar, K. Prophecy and Progress: The Sociology of Industrial and Post-Industrial Society. London: Penguin Books, 1978.

51. Kiezun, W. Management in Socialist Countries - USSR and Central Europe. Berlin: Walter de Gruyter & Co., 1991.

52. Horvat, B. 'Nationalization, Privatization or Socialization: The Emergence of the Social Corporation'. In Targetti, F. (ed.) Privatization in Europe: West and East Experiences. Aldershot: Dartmouth, 1992.

53. Jaklič, M. Strateško usmerjanje gospodarstva [Strategic orientation of the economy]. Ljubljana: ZPS, 1994.

54. Ribnikar, op.cit.

55. Mencinger, op.cit., p.27.

56. Mencinger, op.cit.

57. The Economist Intelligence Unit, EIU Country report 1995. 1st quarter 1995. London: EIU, 1995.

58. The Economist Intelligence Unit, EIU Country report 1995. 3rd quarter 1995. London: EIU, 1995.

59. Mencinger, op.cit., p.23.

60. 'Small, Scenic, and Flexible'. Financial Times, 12.4.1994.

61. Mihelčič, for example, writes about the transition of Slovenia into an 'information' society.

    Mihelčič, M. 'Za uresničitev ekonomske politike je potrebno zaupanje ljudi' [For the realization of economic policy the trust of people is needed]. Slovenska ekonomska revija (Slovene Economic Review). Vol.43, No.2. Ljubljana: 1992.

62. The Statistical Yearbook for 1994 shows that among 845,000 of all employed 381,000 worked in the service sector.

63. The structure of GDP can only be approximate because the Statistical Yearbook for 1994 shows the statistical indicators for 1990. In the same year service industry had a 40% part in GDP production, but

it has been growing since then (as indicated in the EIU Country Report, op.cit.).

64. EUI Country Report, op.cit.

65. 9.1 percent of the active population was unemployed in 1993 (Source: Statistical Yearbook 1994).

66. The comparison between the year 1992 and 1993 shows that while there were almost no changes in numbers of public enterprises and enterprises in social ownership, the private sector experienced an increase of 10,000 new firms. (Source: Statistical Yearbook for years 1993 and 1994)

67. Again Ribnikar (op.cit.) comments: "Entirely consistent with quasi-equity is workers' self-management. As nobody can be identified as the owner or can exercise control, and the state should not perform this function either (the market-planned economic system was introduced as a system to replace the centrally-planned system with its state ownership), an empty space has been created which has to be filled by somebody. It has been filled by workers, who perform the function which belongs to the owners - the function of control."(p.12)

68. Jaklič, op.cit.

69. The International Management Training Centre, Brdo pri Kranju, is an example.

70. The latest educational legislation gives a lot of emphasis to vocational, technical, and higher education in terms of better connections with the scientific and productive sectors.

71. Children started primary education at the age of seven. The primary, also compulsory, education lasted eight years. Secondary education, at the time, was tripartite: three years vocational school, four years technical school, and four years gymnasia. Higher education comprised two, or four to five year programmes, the last mainly academically oriented.

72. Documents of the 10th Congress of the League of Communists in 1974.

73. See, for example: Kejžar, I. Organizacija vzgojno-izobraževalnega sistema v Sloveniji. [Organization of the educational system in Slovenia]. Ekspertiza. Kranj: Fakulteta za organizacijske vede, 1990.

74. One of the first analyses and a critique of 'oriented education' in Slovenia was the book of Milharčič, M.H. and Šušteršič, M.: Šolska reforma je papirnati tiger [School Reform is a Paper Tiger]. Republiška konferenca ZSMS in Univerzitetna konferenca ZSMS; Ljubljana: 1986.

75. Pediček, F. 'O projektu "usmerjeno izobraževanje"' [About the project 'oriented education']. Vzgoja in izobraževanje. No.5, 1992.

76. See: Zakrajšek, S. Slovensko šolstvo v tranziciji [Slovene education in transition]. Ljubljana: Bitex, 1995.

77. Zakrajšek, op.cit.

78. The most often used English translation is 'matriculation'.

79. The Law of organization and financing of upbringing and education, Official Gazette of the Republic of Slovenia, No.12, 1996.

80. One example is the three conceptions of future education:
In January 1991 the first conception came from the Board of Education and Sport with the title Education in Slovenia for the 21st Century, also called the 'blue book'. In January 1992 another expert group, financed from the Ministry of Education and Sport, published 'Towards the New Conception of the Primary education'. The third suggestion of the new educational concept was published by the Ministry of Education in January 1995 and it is called 'The White Book of Education in the Republic of Slovenia'.

81. Statistični letopis Republike Slovenije [Statistical yearbook of the Republic of Slovenia].Ljubljana: Zavod RS za statistiko, 1993, p.510.

82. Statistični letopis, Republika Slovenija [Statistical yearbook of the Republic of Slovenia]. Ljubljana: Zavod RS za statistiko, 1994.

83. ibid.

84. In this respect Seidman says: "The purpose of in-depth interviewing is not to get answers to questions, not to test the hypotheses... at the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience."(p.3)

    Seidman, I.E. Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences. New York: Teachers College Press, 1991.

85. For the general questions of the interview see Appendix 1.

86. Seidman, op.cit.

87. Seidman, op.cit., p.42.

88. For more about 'information saturation' see Seidman, op.cit.

89. The characteristics of the interviewed participants in England are described in Appendix 4.

90. It is important to note here that none of the participants has got an insight into the theoretical propositions of the models of this thesis. Every interview followed the nine major questions (see Appendix 1: 'Questions for the interview'), but where clearer answers were needed the interviewer followed up with different sub-questions. In the case of 'the reasons for major educational management changes in last years' the sub-question most often asked was: 'Do you think that changes which have occurred in managing education today are mostly related to the implementation of new political system, or to economic development, or to some general social changes?'

91. 17 respondents gave evidence.

92. The argument of 'lack of conception' and 'lack of long and medium term objectives' in contemporary Slovene education is mentioned here for the first time but very clearly. We will return to it in detail later in the analysis.

93. 'Higher levels' of the educational system in Slovenia means in this thesis the different departments and offices within the Ministry of Education and Sport.

94. When talking to the participants about education in the previous system, the impression was that they are quite reluctant to go into details.

95. The same participant explained his views further on: "The more we deal with professional [expert] issues, the more we should [in the Board of Education] be autonomous. But this is not so... the Minister says 'you are autonomous' and then we build a concept of our work and this of course costs more and they are not willing to pay. This is a catch, you see."

96. He means different Ministry departments.

97. One of the teachers (T3/5) was more positive, giving the example of teachers' initiative: "now there is a special INSET centre within the Board of Education and we can express to them our needs, suggestions and then they organize the whole thing. It only started

this year, we will see." For her it very much depends on teachers: some teachers seek innovative approaches to education and try to get in contact themselves with the Ministry departments and elsewhere; they also help in organizing events and coordinating meetings. While some teachers just wait for things to come to them.

98. Here he means uniform schools.

99. The participants in general are very positive about the introduction of matriculation exams by the end of secondary education. What is an object of critique is the way and the timing of their implementation.

100. Every new programme and every curriculum change has to be approved by the National School Council. It can take months for some changes to pass.

101. Another example came from one teacher (T1/5): "There is too much bureaucracy and administrative procedure... for example, the new textbook has been printed but cannot be sold, as we must wait for the new, higher price." (It is up to the Ministry to give permission for a general price increase of textbooks.)

102. The Board of Education was, at the time of the interviews, still part of the Ministry of Education.

103. Baldridge, J.V. 'Building a Political Model'. In Bush, T. (ed.) Managing Education: Theory and Practice. Milton Keynes: Open University Press, 1989, p.62.

104. The Board of Education was at the time of the fieldwork a constituent part of the Ministry of Education and Sport. The last part of the participant's response shows that the Board of Education is not perceived as one of the Ministry's bodies but rather as a separate institution.

105. She gave an example of schools' participation in decision-making which started "with the free choice of subject areas. They were left to be decided within schools and supported by a lot of meetings, and encounters of headmasters, teachers, school advisers; then seminars, training, and again looking to the suggestions from field... So this did not develop within a bureaucracy, and it was always tested through the field."

106. For him "The Ministry is more in a quasi-function, and there is also a National School Council, and that is it. There are no others. The Board of Education is a part of the Ministry and it is not clear what they should do exactly. Universities and institutes have not got a

proper function in all this, they all strive to survive by getting some well paid projects... Decision-taking is concentrated highly in the Ministry... and they are inventing all kinds of things, I do not know how and why, but the general strategic policy is missing... this vision, these guidelines for us practitioners are not there." He also added that "it is clear we haven't got 'brains', we cannot select people [for important managerial posts]... so there is no one who would made planned decisions, who would have a vision, who would be responsible just for this... if we had invested more in education some years before and after Independence, we would not have such problems."

107. They relate to the time between the year 1989 and 1991.

108. How much schools are concerned with their development shows also in the evidence that all five secondary schools have established projects and exchange relationships with schools from Europe (Germany, Austria, France, Great Britain). These relations were developed on the schools' own initiatives and some have lasted more than ten years.

109. One of the heads (H4) also said that today it is much clearer what rights in decision making pupils have. "They can give their ideas and opinions... from school to the National Pupils Council... and right now we are encouraging interschool competitions and research work."

110. For one teacher (T1/4) it is necessary that the economy gets more involved in vocational schools: "Pupils need practical experience to be slowly incorporated in the world of work." He was very happy with the new legislation and that the apprenticeship system is back in education.

111. Here is meant the advisers from the Board of Education.

112. The adviser explained: "Schools have got different ideas, for example: more attractive programmes to get higher enrolment so they can chose pupils... and they do expect us to work on these programmes. We also try to help them in their attempt to loosen tight standards of financing... then schools have a lot of personnel problems... in short, I do think we have established good collaborative relations."

113. He also thought that one of the functions of politics is management of this information. When the information system is accessible to many people, the power of politicians is diminished. "If only one knows, and knows all... than he or she can do whatever they want. If this person knows that other people also know the same thing, the

situation is much different", he concluded. His views about the vital changes in the information system were not as enthusiastic as those of previous respondents.

114. In the school year 1993/94 matriculation was tested experimentally in some schools.

115. Her opinion was also that efficiency is as important as quality and that matriculation as a highly motivating factor will extend the quality of outcomes and the number of good pupils.

116. In secondary schools a marking system of individual performance in almost every subject means oral and written examinations every term at least twice; it is graded from 1, which is called 'negative', to 5 which is 'excellent'. Descriptive reports are not a common practice.

117. A language teacher (T1/2) pointed out that the emphasis in their subject area was much more on learning grammar rules and less on how to use them. For her today this is obviously changing. And another teacher (T3/3) said: "A lot of efforts have been made to improve quality, but how much has been achieved is another question... A lot of emphasis is still on acquiring knowledge and less on the upbringing of young people."

"There is still a lot of ballast in schools... They still cram pupils with unnecessary data... and this process changes very slowly." explained another participant (A1) and added: "The way teaching is done, the transmission of knowledge, thinking, analysis, synthesis, and so on, are more or less the same as in my time." The reason for this is, for him, system inertia; if teachers do not develop to a new quality, they cannot really contribute to the changes in the next generations. "It is a great contradiction" he said, because "for the 'youth' the 'oldness' is necessary... a kind of conservatism is needed for the liberal processes to start." The same adviser also mentioned that within the Ministry the situation is worse: "employment is set on a kind of traditional family principles... What I would like to see is that my boss would be more knowledgeable than I am", and concluded that much is changing in parents' attitudes: "There is already a group of parents, who know well what quality means... not just pupils graduating from school, but also what are they doing, gaining in schools. They seem to consider quality as a set of attitudes, skills and knowledge, which would help young people in their future life like: speaking a couple of languages, a basic logic of sciences, a growing need for leisure culture... and it is also important that you experience culture, arts, and sports, if not, it is difficult to learn and to teach about them."

"At least for five years", was an interesting comment of one headmaster (H3), "we are aware that if we want to survive as a school, we must go for quality. The generations are becoming smaller... competition is increasing. Some of the schools will have to close in future."

118. She continued: "I rush all the time, I am never in my office, but at the end of the day I can show you one written invitation, if any at all... All this is of course more related to management in general, but the same goes for the information system. One would expect that we would have a solid data base in the house [within the Ministry], but then you find that the information I have got about teachers, schools, programmes, and whatever else is not the same as my colleagues have... information, be it numerical, graphical or descriptive, the most important thing is that it can be understood and interpreted in the same way, so you can rely on it... the 'unit of measurement' should be agreed."

119. He meant the Ministry.

120. The adviser (A1) from the Board of Education admitted that the old information system was largely based on the 'analysis of efficiency' they got from schools every year. He explained: "These reports were then summarized for each community... at least we knew how many children and teachers were in schools. Now the old system has gone and the new one is missing."

121. And one adviser (A1) was of the same opinion: "We fill in a bunch of statistical forms every year, but we never bothered much about numbers... you cannot monitor progress through numbers... We do our own studies about the progress of our pupils."

122. Marks are still important information. They are included in all statistical forms that have to be filled for the Ministry.

123. Yet, for another teacher (T2/4) the most important source for years has been their adviser at the Board of Education. "For quite some time there has not been adviser in our subject area... and we missed some important information about teacher training", she complained.

124. The problem he explained was: the cleaning lady after a long sick leave was permitted to work only by sitting all the time. The Ministry of Work did not offer any solution. His suggestion was that she had better stay at home and get her salary. This was then agreed.

125. One of the teachers (T2/2) said: "When there was a subject area adviser in the Board, the communication was smooth and satisfactory; since he left we miss our regular meetings [with the adviser] which were very informative and problem solving oriented."

126. Pupils (P2) from another school explained how they communicate: "Information is exchanged mostly nonformally, on corridors, in class, out of school... but we have also a school newsletter and the school radio... and there is a notice board where we can append articles and other different interesting things; the notice boards are for pupils and for teachers to use."

But in another school pupils (P3) complained: "Some information we get too late, e.g. about changes in the timetable... in our school we have got a paper but it is a literary one."

127. She added: "Before, I was collecting all the information of concern to them like opportunities for further education, for scholarships, different phone numbers, names of contact persons... And there is another problem - interpretation of the information. The more there are mediators the greater are the possibilities that information will be transformed and will lose sense. It is always better to get information directly from the original source and if a pupil does not understand something, he or she can always come to me."

128. One head (H2) said: "as far as the free choice subjects are concerned, we developed our own programme and organization... and we try to exchange experiences with other schools."; another headmaster (H5) pointed out that "what is missing is the exchange of practical experiences, methods... all that is important to upgrade our experiences and quality."; almost the same was one teacher's (TD1/3) comment that what she misses is the collaboration with other similar schools; and a teacher (T3/4) said that "in vocational subjects it is important to communicate with teachers of the same area in other schools, to exchange information about experience, literature, innovations... We should develop our own magazine."

129. His argument about programme and curriculum changes is supported also by one headmaster's (H1) comment: "they [those responsible for the curriculum and programmes changes] want to change programmes all the time... this creates a lot of confusion... one of the problems we have got in general is that we do not appreciate enough what we had already developed through the years... there are many good things", but, in his view, they are not communicated.

130. Two other teachers said that they need to know more about pupils than just the date of birth, but unfortunately the new legislation makes the collection quite uncomfortable, time consuming and sometimes, when parents do not or cannot collaborate, impossible.

131. She said: "I know how many children are born in our local community every year, then I also explore the employment trends; then we work closely with primary schools in the area and we also keep other information about different institutions that we consider useful for us."

132. He also pointed out that this kind of information should be available because if prepared properly, it can be very motivating for school development. Similarly another headmaster (H5) stressed: "These are important data... because they show the achievement of the school as a whole and are therefore a mechanism to encourage or warn individual teachers." The respondent pointed out that as this information is not available they try to collect some of it from University institutions (e.g. students' performance indicators in relation to the previous secondary school) and that proper standards or criteria of individual and school performance will probably be developed with the new matriculation.

133. Here it was not so clear what he meant but further on in conversation he explained that the percentage of different grading marks are decided in advance by policy makers.

134. A deputy head (D1) gave an example: "Some evaluation has been done about the advancement from primary to secondary education but we never received any feedback information. My opinion is that this is mostly because they are afraid of the reaction this information could provoke." In their school, he said, they are trying to develop internal evaluation and teacher self-assessment.

135. The teacher gave an example: "After the new legislation all school statutes have to be changed and approved by the Ministry... It is a long bureaucratic procedure."

136. A teacher (T3/4) from another school explained that every year teachers of the same subject from all over the country meet at least three times in so called 'teacher active' sessions. In these meetings they try to "establish some goals, like teacher training needs, curriculum issues... and we try to improve bit by bit. This was not a practice before."

137. The respondent mentioned an example where before pupils' bad social circumstances were often taken into consideration in marking.

138. She explained: "Before the meetings were very formal and the groups [different committees] were fixed. Now is much more flexible... We meet when we need to and with those who are concerned", and added that in this way everybody can get and pass a lot more information. The main and the most reliable sources of information are for this interviewee nonformal, personal contacts. The respondent also collects certain information systematically, so other people know exactly what they can get.

139. One deputy head (D1) expressed the view that there is not much difference between the information system before and now: "It is not settled." He also explained that much of the information they need in school to organize the next school year properly does not come from the Ministry in time, like "procedures of matriculation are still not clear and we are already organizing it... or last year we had to collect application forms from pupils for the matriculation by 15th of June; on 30th of June, when the pupils are already on holidays, the National School Council has adopted new regulations. And how can I than plan a timetable for September? The Ministry should be in charge to give us this information in time."

140. She further explained: "information is more closed and I think that if before the whole system was more centralized with the emphasis on the Ministry, today we are more centralized and hierarchical in school. But it is also true that if the self-management system meant more information, there was also much more anarchy; now it is much more organized and in order... as the order would move from the top into the schools."

Chapter 5: SOCIAL BACKGROUND AND EXAMINATION OF EMIS IN ENGLAND

5.1 Introduction

This chapter studies educational management and EMIS in England. It is intended to highlight the understanding of EMIS in the field in one of the world's most advanced postindustrial countries. The purpose of this part is also to see what were the main reasons for recent educational reform and what has been implemented.

In the first part it will be argued that specific political and economic developments, characterized as 'Thatcherism', have in the last fifteen or so years led to a great many changes in the educational system. These changes are most often defined as a 'greater centralization' of governmental power and a 'free market orientation' of educational institutions. In the second part, the fieldwork analysis, these aspects were highlighted by the responses of participants.

The chapter has then two main parts. The first gives a brief overview of the main political and economic developments which have had an impact on the present educational situation; and educational developments brought in by the Educational Reform Act in 1988 are also discussed. The second part of the chapter is the analysis and interpretation of the data collected

through the interviews in the field. The answers, views, opinions, and critiques of teachers, pupils, headmasters, and LEAs' advisers are divided into those concerning educational management changes in general, and those about educational management information systems. The findings from the fieldwork will be later in the thesis compared with those from Slovenia and with the theoretical propositions of the thesis.

5.2 Socio-political and economic developments related to education and Educational Reform Act 1988

It is clearly difficult to discuss educational and other social developments separately. Postindustrial societies are extremely complex and any analysis of one specific social sector cannot be done without including elements from the others.[1] Here the discussion will first be of the main political and economic developments that have had a deep impact on contemporary English education. This analysis will be followed by a discussion of educational reform after 1988 Educational Reform Act.

5.2.1 Political influences and some social trends

Education in England today is a central political issue. Looking back to the political developments since the end of the war it can be noted that politicians have become more (and not less) interested in education. After the Second World War an expansion of the 'welfare state' was characteristic

of England. The point of the postwar welfare state is, for example, presented in *Learning to Succeed* :

> mass provision was seen as the means of improving the general standard of living of people: it included the National Health Service; National Insurance; local authority housing and State-funded education.[2]

The political event that shaped much of the education after the war until the late 1970s was the 1944 Education Act. Educational developments after this Act until recent reforms have been considered as being based on "a consensus between the main political parties"[3], "and the legislative arrangements made within its framework up to 1988, established a balance of control in educational institutions"[4]. The 1944 Education Act was then the product of a coalition government and for almost three decades there was a consensual agreement among the political parties on educational aims.[5]

In between 1944 and the end of the 1960s the general feeling was that education could be non-political.[67] In the 1970s education more obviously become a central issue of political speeches and activity. The 'Great Debate' in education was started in 1976 by the Prime Minister James Callaghan. The proposals that followed the 'Great Debate' and eventually led to the 1988 Education Act were closely linked to the politics of 'Thatcherism'.[8] 'Thatcher reforms' in education represent a major intervention of the government into education. The shift in educational policies has been noted by Lawton:

> Since 1979 - and especially since 1988... politicians have crossed over the border between legitimate concern and political interference, motivated by political ideology -

> specifically by the activities of right-wing extremists whose influence is out of proportion to their numbers[9];

and Coulby makes it clear that the passing of the 1988 Educational Reform Act "dramatically broke... the balance [of control] and shifted huge areas of control over educational institutions to the Secretary of the State at the DES."[10]

The political background for educational reforms, as indicated earlier, was 'Thatcherism'. Lawton in his book *The Tory Mind on Education*[11] provides an in-depth analysis of this phenomenon. He notes that immediately after 1945 the Conservatives shared the overall post-war optimism and were interested in the development of an improved society as compared to that of the 1930s. Lawton finds that by the 1960s most of this "optimism had evaporated and there was a return to more traditional Tory views."[12]

In the last two decades the idea of the 'welfare state' has lost much of its power; the 'welfare state' has entered into deep crisis.[13] Lawton comments:

> An alternative to Keynesian consensus economics was lurking in the background, together with the social philosophy which supported criticisms of the welfare system on moral as well as on economic grounds. Individualism seemed to be gaining ground at the expense of collectivism... The public seemed to be ready for new ideas and alternative solutions. The economic picture looked even gloomier after the 1973 rise in the price of oil and the beginnings of a world recession. When the future looks fearsome there is a tendency to look nostalgically to the past and to embrace reactionary solutions.[14]

By the end of the 1970s traditional Conservatism introduced neo-liberal ideas into politics.[15]

When in 1979 Margaret Thatcher become Prime Minister the ideas of the welfare state were dismissed and concepts of 'privatization', 'free market', and 'individualism' become prominent. The politics that followed these concepts led to the privatization of large, state supported, enterprises; and numerous public services were pushed to the market. The worldwide recession of the 1980s was a major excuse for those reforms. The reforms started by Margaret Thatcher continue in the 1990s under John Major's government. The consequences are widely observed.

Privatization and restructuring of the industries under the Tory government have produced high unemployment which has also "shattered any illusion that everybody prepared to work is assured of a task."[16] In Spring 1993, 2.9 million people were claiming unemployment benefit in the United Kingdom, that is 10.5 % of the workforce; in some parts of the country[17] unemployment figures have reached almost 20%.[18]

Another consequence is shown through the income distribution among the population. Statistics show that in years between 1979 and 1989 differences in income between the least well off and those with higher incomes have widened:

> Over the period covered, the real income of the bottom fifth of households did not change at all, whereas it increased by 23% for the middle fifth and by 40% for the top fifth. Altogether, society is more unequal and more polarised.[19]

These political reforms have been oriented towards one main goal, which is the enhancement of the national economy, not for immediate national

benefit, but for international competition.

5.2.2 The postindustrial economy

The British economy is now postindustrial. It is largely based on the service sector and on knowledge and information production. The literature predicts more dramatic scientific and technological advances: instantaneous and cheap information transmission almost anywhere in the world; within a few years the choice of 200 or more television channels; advances in biological sciences, in medicine and in the field of new materials.[20] The evidence shows strong growth in managerial tasks and disappearance of manual tasks.[21]

Despite these developments the literature often mentions the setbacks and failures of the contemporary British economy. Howarth who compares British educational reform with that in Japan suggests that there are seven factors affecting British poor economic performance and that education is only one of them.[22] The author identifies as those factors: the state structures, industrial and company structures, financial markets, party politics, industrial relations, attitudes of the people - especially class - and misdirection and incoherence in education and training.[23]

5.2.3 Educational reform

Since 1988, as a consequence of the Education Reform Act, education in England and Wales has undergone the most far-reaching reforms since 1944. One of the explicit reasons for the reform was the widespread dissatisfaction about educational standards which became obvious already at the beginning of 1970s. In this respect Hough explains: "The country's poor economic performance was attributed, at least in part, to faults in the educational system."[24] The author points out that at the time approximately 60 percent of young people were leaving full-time education at the age of 16, which was almost twice as much as in other developed countries; that different international tests comparing students' knowledge showed that in many other countries students scored much better; and that the third source of complaints was from employers who were arguing that students were not adequately prepared for work.

For these reasons, as indicated earlier, it was the Labour Party which in 1976 started the "Great Debate" in education and demanded a National Curriculum[25]. After more than ten years of discussions, reports, and a change of government, the fundamental changes in England and Wales were marked by the Educational Reform Act in 1988 and this was followed by other significant Acts. For the purpose of the thesis, especially the fieldwork, the main provisions of the 1988 Act will be discussed first, and a review of major criticisms of educational reform will follow.

The main provisions of the 1988 Act were:

1. For the first time in English history a National Curriculum was introduced for children between 5 to 16 years of age supported by testing and assessment on a national level. Records of achievement were introduced for all school leavers.

2. The decision making powers of school governing bodies were strengthened. In secondary and primary schools Local Management of Schools (LMS) was introduced. LMS has meant that schools are administering their own budget and school governors decide on expenditure for salaries, equipment, books, etc. while the capital expenditure, school transport, advisory and other services continued to be LEA's responsibility.

3. Subsequently the administrative and decision making role of Local Educational Authorities (LEAs) have diminished. Their powers have also been limited by a more independent status for further education colleges and by the establishment of the grant-maintained sector. In other words,

4. Any maintained primary or secondary school with more than 300 pupils could choose to become grant-maintained, i.e. to 'opt out' of control from the LEA.

5. City Technology Colleges were introduced, a special type of secondary education, with independent status and with the role of strengthening linkages between education, industry, and commerce.

6. The whole financial system of higher education has been changed with the new Universities Funding Council which replaced the former University Grants Committee.

As a consequence of the 1988 Act and further legislation, higher education has expanded. The polytechnics were taken out of LEA control and they later became universities. The National Commission on Education Report[26] shows that in 1990 there were 19% of young people in higher education while in 1992 the figure was 28.3%. The same report also claims that the 1988 Act "aimed at ending a 'producer' dominance in education and substituting for it more of a 'market' or 'competitive' element."[27]

Two main criticisms of the 1988 educational reform will be discussed here: the exclusion of the independent educational sector from the reform, and the 'free market' orientation. Among those who have written extensively on the two issues are Coulby and Bash.[28] In their works it is stressed that the 1988 Educational Reform Act does not address the fee-paying schools and that independent schools are "explicitly excluded from the National Curriculum and testing which are to be compulsory in state schools."[29] The main point of the critique here is the *de facto* social discrimination against lower class children compared with those of higher social class. In this respect Coulby explains:

> For the people who formulated and adopted... the [1988] Act, with the exception of its higher education chapter, is legislation for other people's children... This interrogation inevitably explores the possibility of contradiction and class conflict between legislators with explicit middle class interests and potential beneficiaries of the legislation who are

predominantly working class.[30]

To get a closer insight into the problem this thesis has included one independent school in the fieldwork exploration.

Other criticisms relate to the 'free market' ideology in education. The ideology has been well presented by Heller and Edwards:

> The invisible hand of Adam Smith's perfect market mechanisms are [sic] now considered (like the selfish gene) a more effective regulator of quality than the direct manipulation and control of a planned economy. The correlate of this in education is the view that parental self-interest will lead more cheaply, speedily and efficiently to a range of valued and effective schools than the bureaucratic planning and intervention of LEA officers.[31]

Although official rhetoric is about the 'free market' orientation of education, based on the assumption that consumers should have choice, the facts show that actually very few aspects of education are 'on the market'. One of the key characteristics of the classical 'free market' theory is the non-existence of a centralized planning and control agency. This is certainly not the case in the current English educational situation. Instead of becoming more 'liberal' in terms of market operation, as declared, it has become more centralized and more controlled. This trend has been analyzed by Bash. By comparing basic conditions for the existence of a free market with educational developments after 1988 he concluded that:

> the idea of perfect competition in education is as naive as in any other context,... the *monopolistic* competition model... may be more acceptable.[32]

The 'Great Debate' started in education in 1970s that brought about major

changes in education does not really seem to be finished. Educational reform has brought out many controversies and has been generating a lot of debate about contemporary British society visible in the current debate between and within the three main political parties. However, not much, as the earlier analysis has shown, has been said about EMIS. The fieldwork analysis in the next part attempts to bring some clarification in this respect.

5.3 Field analysis of the main educational management developments

As in the case of Slovenia, the analysis of the fieldwork in this chapter is organized to test the theoretical propositions of this thesis, but here in English education. Earlier in the thesis the suggestions were developed that educational management in industrial societies shows some specific characteristics, and they were called principles of 'fordist' educational management. As societies move into a postindustrial phase, the thesis claimed, characteristics of educational management also change in an identifiable ways; ways which were called principles of 'postfordist' educational management.

The previous discussion showed that England is a postindustrial society. The fieldwork in this chapter will explore educational management in order to test the nature of the changes from fordist to postfordist principles. Three major issues will be discussed: whether the style of hierarchical structures is vertical or loose; whether decision making is centralized or decentralized;

and whether individual performance within educational system is highly controlled or have individuals and institutions gained autonomy and developed - in their own view - creative conduct.

The analysis starts, as in the previous chapter, with the respondents' perceptions of major educational management changes and continues with their views of, first, hierarchy and control changes; then with the participants' opinions on the creation of educational policy; and finally with their ideas about every day educational management.

5.3.1 Major changes in educational management and reasons for them[33]

All respondents agreed that major changes in educational management have occurred in the last ten or fifteen years. "There seems to be a greater push within the schools", was the general view of one teacher (T1/1). One headmaster (H1) was more specific in pointing out that "The school operates within the national educational system, and therefore you cannot divorce what is happening in this school from what is happening nationally, because of the two most significant changes, one is the introduction of the National Curriculum, the other is the delegation of management responsibilities from the educational authority to governors of schools, which have a statutory basis and every school is effected, and they are the two main engines of change. They have changed and I think they are the most significant. As far as this school is concerned that has

meant that the school has had to adjust its systems to doing those tasks which have to do with the running of money, the running of premises, all sorts of management areas in the school that are run within the school rather than run under the local authority."

The introduction of the National Curriculum had major impact on the teaching process. Some 15 or 16 years ago, teaching meant that "you were free to get on with it, you negotiated as best as you could with the departments... until that time teachers were on their own, allowed to do their own thing..." said one teacher (T1/1). Another teacher (T2/3) commented that the content of teaching has now been imposed.

In public schools too a lot of innovations in curriculum development have been introduced in last two years. A headmaster (H2) explained: "I set up this committee to review and make suggestions... The members were chosen as people with ideas and not representing individual interests... They then came up with the proposals about particular subjects and the amount of time for these to be taught... The next stage was to consult the people, so the first consultation is with the housemasters. The second was with the academic heads of departments."[34] The whole process was based on extensive consultation, which the respondent called 'participant management' and this meant innovation in that independent school.

The introduction of the National Curriculum has also made "education more rigorous in this country [e.g. League Tables]. So there's more accountability which is why we need to know whether the departments are

doing what are they supposed to be doing", pointed out one teacher (T1/3). Accountability is also considered to be one of the major reasons for changes in educational management; one headmaster (H1) explained: "I think it [the main reasons for change] could be summed up in one word: accountability. The schools need to be now individually accountable for what they did, therefore the attention which has been placed nationally on attainment levels, in terms of examination results, attendance whatever it is - a school is individually accountable."[35]

The changes in curriculum management have also "increased the amount of paper-work that we have to do quite considerably", complained one teacher (T2/3). "In the past we did not require formal schemes of work. My department was very flexible." Now they have to have very formal schemes of work which she finds quite problematic when they try "to create one that is creative and suitable for the children."

The LEA advisor (A2) commented: "Until the introduction of the National Curriculum, the primary curriculum was extremely varied and inconsistent. The introduction of the National Curriculum in the first two key stages has... had a completely beneficial effect on primary practice in terms of a much more consistent offer of balance... it has ensured a kind of base line of the delivery... Generally it is doing what it set out to do which is to raise standards." For her "there is still a great deal of flexibility in that, for individual teachers, for their spark and personality to be brought into the curriculum, and it hasn't stifled creativity at all"; while in secondary schools, she continued, there is "still a lot to do... I think it has again made

very demanding and rigorous planning requirements from year 7 to the year 9 and then on to 10 and 11. A lot of work has to be done at key stage 3 to try and make it coherent. Schools are more in flux than there are in primary. This September they will be receiving the first cohort of the key stage two children, with national results. They've got a plan to take them from where they are to key stage 3. And when they get to be fourteen there's an immense pressure on the right decision to make for the children in terms of vocational, academic [areas]... I think that with GNVQs and GSCEs and all of that to be sorted out it is giving certain schools big headaches."

Ten years ago, when the next respondent (A1) started to work as an LEA adviser, "people were not very clear about assessment and criteria. Well then along came the National Curriculum and basically told people these are your criteria, this is what you are supposed to be teaching and this is what you're supposed to be assessing... that made things far more straightforward." He also added that at the time there was "quite a lot of backlash against that... people not wanting to be told what they had to do and resenting the workload issues associated with it", which opened up questions about teachers' autonomy.

Another new aspect of the curriculum management was noticed by a teacher (T1/1) who said that "the National Curriculum is guiding our curriculum and we are working within those guidelines. We set up a curriculum for the school...in a way we wanted to. And then we see if we can afford it. If we can't afford it, then we cut it!" In the old system, he

continued, "all of that [e.g. staff, equipment] was determined by the authority [LEA]. Now we can put a few more resources where we want to put them rather than where the authority tells us to put them."

The role of the three main constituent parties of the educational system: the schools, LEAs, and DFE, in educational management has, according to the responses, changed drastically. For one adviser (A1) "the major change has been... firstly... that central government now seeks to work more directly with schools. And secondly, the central government is actually making more decisions, so they're making more decisions centrally and they are seeking to work straight through to schools and in a sense... bypassing LEAs."

The 1988 Education Reform Act introduced the so called 'Local Management of Schools'. For schools this, explained one head (H1), "is not a matter of simply the school looking after the caretaking of the grounds and the maintenance and all of that and deciding how many teachers it has. It means that any decision the school makes, that has to do with its future, is taken by the school itself on educational grounds... [taking into account primarily] in what way will it benefit the children, and in what way will it benefit the school."

The teachers "are far more involved in management, which was once the last priority", commented one teacher (T1/1) and added that if "in the curriculum and staffing, lets say, we've been used [to the idea] that authorities would say you are allowed to employ so many staff. Now we

go to the governors and say: Can we have so many staff to cover it?" One head (H3) observed: "before... we had many more things that we were told to do, we didn't have choice... now we have a choice whether we buy resources or whether we choose to buy teachers"; but this for the same respondent also means that "everything we decide on we have to look at the financial implication. Nothing that we introduce into school can be introduced without considering... how it will effect the budget."

The local management of schools has in one teacher's opinion (T1/3) changed the ethos of the school and made the decision making sharper "in a sense that some years we take on staff, some years we have to get staff to leave. It's a decision it's not a piece of paper from the local educational authority saying 'you now have 50 teachers where before you have 52'. It is something we have to decide for ourselves." The other important change is for the same teacher "that all of London used to be one educational authority and people have mixed views about it. Because it was quite bureaucratic; but then had some extra facilities." He explained that before they were able to meet other teachers and deputy heads from all across London; "now it is just Westminster which is 8 schools and it's a sort of a very narrow environment." Schools miss "the support from the centre that was there before but on the other hand we've now got our own money and so we are in control of our own destiny."(T1/3)

A lot of schools still seek advice from the LEAs, but educational management in the LEAs has changed a lot. One LEA adviser (A2) explained: "They'd [the schools] ring us up and say 'We are not quite sure

about this. Have we got to have this in place or not?'". She mentioned a few examples like modern foreign languages, where schools ask whether these ought to be taught as a short course or not; or asking about the option: geography and history. "Now, we don't have these specialists to give advice so we have to say to schools who manage their own money 'If you need advice on that, you've got to buy someone to tell you what to do. Unless you are able to make this decision within your own institution alone.' Generally speaking heads are totally competent and have a good backup of deputies and senior managers who are totally proactive and say 'we need this, we need that, we need the other.'" The same adviser pointed out the very positive side of the Local Management of Schools: "There is a temptation to assume, because it is the National Curriculum, that schools can only be reactive, but schools are being much more proactive and say 'we'll take this, we recognize the framework it's giving us, but this is the way we want to move.' And I think that from the initial stages when there was a reaction, it's now much more proactive, people are now much more in control in what they want to do and can see the possibilities of opening up. So, again very generally and with varying degrees of success, I would say on the whole the secondary schools in [their LEA] are more proactive than reactive."

With the changes in the local government of schools, the financial part of educational management takes new directions of development. "Money used to be controlled entirely by the borough. Now it's allocated to schools and schools are responsible for their own budget." said one teacher (T4/1) and continued that because their "borough is trying to maintain control

over its schools apart from the budget. We recently went through trying to change the school to become grant maintained. The borough fought very hard against that happening, and it didn't happen. Although some of the schools in the borough have managed to - mostly primary schools."

There are also big variations in the amount of money that schools get in different LEAs, pointed out one adviser (A1), explaining that "There isn't a central government part that says you need 'x' amount of money to run a secondary school in Britain, and there's your money. It's still done by a combination of central government grants and local authorities. So you do get variations."

Although different levels in school financial autonomy exist in today's management of schools, the respondents (T1/1, T2/1, T3/3) think that the schools have benefited substantially. Increased financial responsibility "affected all staff in a moral way", but it is "in a way... turning schools into a business", concluded one teacher (T1/1).

In terms of the new financial management the independent schools are in one teacher's (T2/2) opinion "benefiting at the moment. When so many maintained schools are going for their own management, we benefit enormously because we have our own bursars, domestic bursars. And that is something which maintained schools will have to take on board in their own funding management, which I think they have found very difficult... looking after their own finance... and spend money on getting that structure set up within their school."

Another issue of financial management is the teachers' salaries. A difficulty related to this issue was raised by an adviser (A1). "They are nationally determined... but actually paid out by schools... There is an element of teacher's salaries that is dependent on experience,... If you have an experienced staff, your wages bill is very high compared to another school just down the road that has the same number of staff but because they're young teachers, they haven't yet moved up the increment scale, so their pay is lower, but school will not necessarily be receiving more money to meet that later. And also interestingly in terms of teachers' pay, you gather from this recent controversy the difficulties that a national pay award was decided, that teachers ought to get two point whatever of an increase but the government's grant to LEA which would be then fed down to schools didn't match that. So somewhere in the system the money has to be saved because the money is not coming through grants or something on the national level. They say that there are inefficiencies in the system that could be sort of squeezed out to meet these issues of pay claims but in a sense that just shows some of the illogicalities of the system, where some things are being determined at the national level but not everything, so in other words, there's a decision there but not the resourcing, so there's different things being decided at different levels."

Respondents' comments so far have confirmed that the new educational legislation has brought major changes to the educational management of schools, LEAs, and also government. The most significant management changes affecting secondary education were, for participants, the introduction of the National Curriculum and the delegation of new

management responsibilities through LMS. Although the National Curriculum had a major impact on teaching, it also influenced management with its requirements for detailed planning and assessment, for negotiation within departments, and with its financial implications. Another aspect of change was for respondents the LMS whose main intention is to make schools more adapted to the 'clients' needs. In the discussion that follows, participants' views of changed hierarchical structures within educational system will be analyzed.

5.3.2 The nature of hierarchical structures

The hierarchical structures within an educational system, as this thesis discussed in the theoretical part, are closely related to the issues of control and bureaucratic procedures, and centralization of decision making. The thesis suggested earlier that fordist principles of educational management mean vertical hierarchical structures with well established bureaucratic procedures and control mechanisms; while the postfordist principles mean looser hierarchical structures, less bureaucracy and control, and more flexibility and innovative conduct. Respondents have recognized changes that are occurring in relation to these principles within schools, and between schools and educational authorities.

In a discussion about the hierarchy, one headmaster(H1) recognized that, despite many improvements, the structure is still too hierarchical. For him this is mostly shown in full staff meetings. "People are reluctant to get up...

the majority of people feel very exposed... Staff meetings are very formal and a bit stiff." The same respondent also explained that he is trying "to get away from running the place like the army", and because the school is an organization of graduates, "you are asking them to take responsibilities and to be prepared to challenge me just as I am prepared to challenge them... it should be more open and democratic work in school than it has been in the past."

For one teacher (T3/3)the hierarchical structure in their school is quite clear and vertical. He gave an example: "In our department... I am in charge of upper skill science. So that the staff taking exams are responsible to me. I am responsible to the head of science, who is responsible to a deputy head and the headmistress; so that's the sort of line of management." In another school they decided to move from" a house system which... was a vertical management structure to the new system which is a horizontal one... three years ago." (T4/1). They tried to move towards a team oriented structures. The head (H1) of the same school presented the idea to the staff saying: "right you are the team, you run science; or you are the team you run the first year, you do it; not keep asking me all the time or keep asking someone else. You're the team, you make the decision."

The organization and running of different independent schools are very similar, was the opinion of one teacher (T2/2), in the sense that they are still highly structured. The last statement was confirmed by the headmaster of a public school (H2) who said that their school is totally independent, it is highly hierarchical and centralized. Another teacher (T1/2) described the

public school being like "a medieval monarchy. See [while drawing the structure] you've got the governing body on the top there, and you've got the headmaster, the king... In terms of hierarchy and status I don't think that much is done." He also admitted that although the present school structure looks highly hierarchical, in reality it doesn't quite work like that, because individuals have several roles within a structure and they do depend on each other. He added that the hierarchy is very fluid and that they "are too small to be a very structured hierarchy."

Looking to the educational system as a whole, some respondents (T2/1, A1, A2) pointed out that it is becoming more centralised. The LEA adviser (A1), for example, explained: "That trend of central government taking more power and seeking to deal directly with schools was already in train through the eighties, and you often felt Conservative councils getting quite upset, and the Conservative counsellors saying to central government 'you are taking away our powers'. But of course the recent political shift, political power in local government, which means now almost entirely Labour will obviously just continue. Now there is even more reason for the government to work directly... There is no way that with the present government, with the present structure, that you will get powers being devolved from central government or that we will move back towards powers being devolved from central government to LEAs and the schools. Our director has a phrase: we are still an interventionist authority', so in other words we do not just sit back and react in an area where you hand down the central system completely. You are not in a position to actually get out there and get into schools and try to improve them. You are much

more just reacting to what schools are like and you could have one or two inspectors who have got the general duty to move around the schools and to tell the members, counsellors what the quality is like and in particular to react to the government-OFSTED reports."

"What we try to do as an LEA", explained the adviser (A2) from another LEA, is to "take up some of the burden of the directions that come from there [DFE], kind of help to filter it through and do some of the managing for the schools in the sense of saying 'yes, o.k. there's all this coming, but in fact if you look at it in terms of this, this, and this, you should see that you are already doing 90 percent of it'... kind of disentangling the jargon for schools saying 'it's o.k., it's not as bad as you think it's gonna be', and doing that, essentially is what we do most of the time."

Hierarchy relates to bureaucratic procedures within the educational system. The participants assessed the well defined roles and rules of conduct and formalized relations in vertical hierarchical structures; and, they also assessed the balance of the shift to nonformalized rules which are typical of flexible - non-hierachical - forms of organization.

Respondents' comments on bureaucratic procedures were similar to one teacher (T4/1) who said that: "There is a lot more paper work... yes there's a lot more documentation. It's certainly very different from the task I initially trained for." Another teacher (T3/1) considered: "Time spent with kids is very valuable. Any time when I have to fill the filling cabinets with little bits of paper which I never use again, which nobody ever sees again,

to me is a complete waste of time." She further explained that the staff in school have less and less time for direct communication which means that more "bits of paper are moving around... And I am not given the time to process all of that. I have to prioritise all the time. But at the end of my day my priorities always come down to time spent with kids", and concluded that the pressure on time has never been so big as it is today.

In terms of increased bureaucratic procedures one head's (H3) view was that today education is becoming more regulated that it was in the past. Educational management is "much more law oriented... we have to be much more rigorous about our procedures for e.g. fire evacuation: before it was just fire drill, now you have to document it and how long did it take and so on." she continued and added that other areas, like health and safety, have to be assessed in reports regularly.

In proposing the fordist educational management principles of highly structured hierarchies and centralization of decision making within industrial societies, this thesis also claimed that many detailed mechanisms of control are present throughout the educational system. On the other hand the thesis suggested that in postindustrial social settings detailed control mechanisms are disappearing and individual initiative is encouraged. The respondents were asked if the control style of the educational system has changed and in what way. Generally, the answers showed that schools and government have gained and LEAs lost in terms of what they control in education.

"Certainly control has changed." assured one teacher (T1/1) explaining: "I mean we have control over our money... The local authority responsibilities are limited now, most is down to the government." But another teacher (T2/1) said that "There is still a lot of control from their [LEAs] side, because they are holding the... string."

That control in general has increased was the opinion of one teacher (T3/1): "I just feel that I am far more accountable... That accountability is forever justifying what you are doing. Whether that is the fear of what people think outside or whether we are meeting National Curriculum targets or whatever else, I am forever having to justify that... there is a ready check for anybody above me... In the past, I have always felt that there was a certain amount of autonomy. That once I am in the classroom, people trust my judgement, trust my expertise... It seems to me now, that I am looking over my shoulder all the time for bits of paper that people need for justification for what I am doing. And I dislike that very strongly... That control is sort of built into the system."

For one headmaster (H1) control has been extended through school governors to parents and to a wider community. "As a manager of the school", he stressed, "my first accountability is to the governors... community representatives, and to the parents, and to the wider public... to the press, for example." Commenting on changed governmental control the same head thought "that a school should run itself, [but] the framework should be a national framework, not a local framework,... and that the standards that are expected of secondary schools, minimum standards say,

ought to be fixed by the nation... I think that kind of centralization for expectations is right. I think that is happening."

One adviser (A2) commented: "there is much more central control obviously." Her opinion was shared with another adviser (A1): "over the past fifteen years, there has been greater centralization of control... it is a long term process, with some sort of significant marks along the way. The Education Reform Act of 88 would be pretty significant. That would be the major announcement that this is the way how things are going... in terms of the government saying 'we are going to determine more things centrally'." Considering the change in LEA control he explained that before: "It was more a perception of control than a reality. LEAs did not impose the curriculum, they had no powers to say to a school you must teach this... in this particular way. So their influence was more indirect, through things like inspectors... There were no powers in LEA to discipline schools, [so] that we could take money away from them."

5.3.3 The creation of educational policies

This part of the analysis explores participants' views on centralization or decentralization of educational decision making as proposed in fordist and postfordist educational management principles. When discussing the same topic in the chapter on Slovenia, this thesis pointed out that there is a difference between those decisions that have long term impact and those that follow in the everyday life of educational organizations. This part of

the analysis presents some of the respondents' views about policy decisions in education.

Respondents in general considered that the power of central government has increased. One respondent (A2), for example, commented: "Nine times out of ten it's a heavy message from here [DFE], we [LEAs] are an intermediary and an explainer, and schools have to do it, the bottom line stops there [in schools]."

The decision making process related to the introduction of the National Curriculum is an example of centralized policy making. Two respondents (A1, A2) explained that the lack of appropriate consultation of central government with all those involved in educational development resulted in a too complex, over prescribed National Curriculum, with excessive content, which all came out in the Dearing Report[36].

Part of the National Curriculum assessment is the so called 'end of the key stage tests' which should be performed nation wide. Teachers and their Unions opposed the implementation of these policies by boycotting the tests in 1994. "The most powerful message from the schools to the DFE was 'We are not doing these tests, it's too much work!' So, they boycott it and that was a very effective method of saying 'it's too much!'", explained one adviser (A2) and continued that as a result of the nation wide boycott "DFE had to do something about it, because that was just a most powerful response back. And they have reviewed it [the National Curriculum] and cut it dawn dramatically in order to make it more manageable... paid

teachers for the extra time that it takes to administer the tests and to mark them."

The recommendations that followed were also that "The National Curriculum is not the private property of the Secretary of the State for Education of the day, any more than it is of any group of advisers... It is the property of the nation, and it is right that in framing the National Curriculum there should be wide and thorough consultation with teachers... school governing bodies, employers... interested members of public, especially parents - and as far as possible - with pupils themselves."[37] Apart from extended consultation, also being recommended in the Dearing Report[38], "progressive implementation which may well extend over several years."[39]

5.3.4 The sharing of day to day management responsibilities

The implementation of current educational policies has led to extensive and varied every day management activities. This part of educational decision making can also be, as this thesis suggested earlier, centralized or decentralized, depending on whether the fordist educational management principles prevail or the postfordist. The subsequent analysis of respondents' views on every day management is organized in the same way as in the case of Slovenia: it looks at how these activities are shared between school staff, parents and pupils, and a wider community.

The roles of teachers in every school management will be analyzed first. All of the interviewed teachers have a certain management responsibility in school such as being the head of the department, the head of the year, or deputy head. Some respondents (T1/1, T3/1, T3/2) considered that their every day management responsibilities have increased a lot in the last ten years. One respondent (T1/1), for example, explained: "Back when I started teaching in the 60's, teachers were only teaching. Now I am involved in decision making... I manage the computer system... [I do] a timetable... That's a whole lot of extra work. And we have much more contact with governors now than we used to, they are far more involved. I attend all those meetings, the committee meetings."[40]

Within an independent school, educational management seems to be the same as ten years ago - centralized. "There are basically five [people]... who are involved in central management of a school... a sort of an inner cabinet." said one teacher (T1/2); and another teacher (T3/2) from the same school explained that apart from teaching she does not "really have much decision making other than deciding what I am going to teach on which day." Her role in school management "only changed as I've been here longer [and]... I have more experience... [and] my contribution might be more valid than it would be when I was [in school] first year"; but she would like to be more involved.

The analysis of the heads' role in school management show that statutory delegated management responsibilities to schools have changed the headmaster's task. One teacher (T2/1) pointed out that: "he [their head] is

around the place a lot... to have a lot of contacts with people. But with previous heads, they often sat in their gold-adorned ivory towers and you didn't see them unless there was a major problem." For one head (H1), now performing more of the management activities, this means less time spent on the academic side of the school. He would certainly prefer an academic emphasis.

While in general, the "school authorities have been challenged during the last 20 years and some forms of participatory management have been introduced, and some roles delegated, the headmaster does decide on everything", was the opinion of the head (H2) of the independent school, adding that the "director of studies makes day to day decisions about the curriculum", but he pointed out that prior to any decisions there is a lot of consultation. To democratize decision making they have introduced a new advisory body recently - the School Council.

The role of pupils and school management was also discussed in the field. All interviewed pupils consider that they are not much involved in school decision making. But there still exist some ways they can try to solve some of the problems they encounter in school life or introduce new ideas.

Pupils (P2) from one school commented on their influence in school: "at the beginning it's difficult, you can get lost... but it does get better, you get more power. Well not more power, you get more responsibility. And you get to know teachers better and everything is easier." To express their sports and cultural interests they get organized in different societies, which

meet once a week. They admitted that to keep societies going [e.g. cinema trips]... they have a lot of work to do. The pupils in the same school have a 'Council', a committee of reps from each house and they discuss things they don't like or want to change. The reps then report back to the house and try to get opinions from everyone.

One teacher (T1/2) from the same school said that pupils to some extent "are the victims... For the most part pupils do not have a consultative role, perhaps they should do, perhaps we should move towards this. But it is not the way we have done things in the past." He also pointed out that getting pupils more involved in school decision making "would be a very tricky area to manage, because immediately people here will feel threatened... teachers will feel threatened... It would take time to change the culture there."

In another school the pupils' main representative bodies are Year Councils. They are "made up of representatives from the tutor groups of one year. They get together regularly... all ideas they have they can exchange... [e.g.] uniform..., teachers", explained pupils (P1) and they said that they are much happier with the situation now where there is a new head. "The last one was not as approachable. I mean now if you think you got a problem... you can go to him [and] you can discuss it." they agreed. They then considered that it very much depends on a head teacher how the pupils' voice is heard. The same pupils also agreed that "In the sixth form there is a better link between teacher and pupil. They see us not so much just as a pupil but as a human being and an adult." which means that they can introduce their

ideas more easily. The only thing they would like to change at the moment in school is to have more choice of A-levels. At present it is the "teachers [that] pick them for you."

The pupils also considered that introducing new ideas is a hard process. "It has got to be a really, really, good idea... it's got to be really well researched and [only] then you can go to..." the headmaster and teachers and try to persuade them. "All the students can agree with it but if the teachers don't, then that's it basically", stressed the pupils.[41]

Respondents also gave evidence on the role parents and the wider community play in school management. According to pupils (P1) parents are quite involved in every day management of the school. As an example one of the pupils said: "the school came into some money [and] they asked the parents what to do with it. They ended up building a hall [but] there was also a choice of sports equipment." He also thought that in this particular case pupils should have been consulted as well.

For one teacher (T3/3) the relations between school and parents is very good. She did not give any particular example of parents' decision making involvement, but she pointed out that whenever they have problems with the pupils "in 99 times out of 100, if you contact the parents, the parents will be very supportive and they'll help you... So we do have a very friendly, instructive, and professional relationship with parents."

In their [public] school, commented one teacher (T2/2), parents have an

input in decision making. "We have very regular parent-master meetings and... [the parents] are very interested in what the subjects are, and what curriculum has to offer. And they want a relevant curriculum... they certainly welcomed the changes we made."[42] Another teacher (T1/2) from the same school was not of the same opinion. He admitted that while parents are in theory considered to be customers, in school management they "don't appear at all." Keeping parents away from school is for him a mistake. Parents being governors in state schools seems to be more positive for the school. He continued: "I thing we sometimes get it wrong in terms of our parents... We are afraid of them. We are aware that parents may have a view with which we don't agree", and would bring about changes in the school.

The same teacher also commented on the involvement of a wider community: "the relationship between the village and this school is minimal. We operate in a sense in a sort of gold fish bowl, we think that we have to abstain with each other... It is an old relationship. While in the state schools they are much more integrated into the community... And... there is that culture of consultation between parents and staff and governors, which we don't have."

Most of the respondents felt that the wider community and schools are best linked through the governors. The general feeling was also that schools have much more contact with governors now than they used to and governors themselves are far more involved. In this respect every day management has become more decentralized along the lines of what was

described theoretically as 'postfordist'.

Participants also commented on the role of LEA advisers in today's educational management. Because the local authority responsibilities have been limited by law in the last 7 or so years, their role in school management has decreased. They still have an important say in the area of school admissions but one of the respondents (H3) commented that the policies in this area are not consistent enough and they create a lot of confusion in schools.[43] The respondent indicated that LEAs still hold responsibility: "They draw up the formula for how the money is to be allocated... and control how it has been spent. They are meant to hold meetings with unions, with the representatives of unions about health and safety, and personnel issues. And not much more really."

LEAs differ a lot in the services they provide to schools. Some have, for example, kept the inspectorate and some not. It very much depends on their financial policy. One of the LEA's advisers (A1) explained the role of the LEA in school management: "[because]... of the restrictions that government imposed [in the financial area]... there is actually a limit of how much you can retain centrally as opposed to how much has to be given out to schools... and so one of the extreme positions would be those LEAs that are trying to give as much as they possibly can out to schools and only keep the bare minimum for central services... and there are those other ones that are giving out as little as possible but still a lot, but they keep as much as they can, as they are legally allowed to keep back for central services."

With the government and the schools taking over many of the LEAs' decision making powers, the role of advisers in every day management has altered. LEAs, in the participants' opinions, do not possess any exclusive powers, but rather share decision making with schools. Depending on each LEA, advisers act more as consultants than inspectors. This new role has been seen as a positive move in schools, and not so positive within the LEAs.

With the discussion of the role which LEA advisers today have in educational management the first part of the fieldwork analysis is concluded. The fordist and postfordist educational management principles of this thesis' theory will be compared with the fieldwork findings later. This chapter continues with the analysis of the respondents' interpretations of the EMIS.

5.4 Fieldwork analysis of educational management information systems

The chapter moves to the analysis of findings in the area of EMIS. The respondents' views, to help the later comparison, are organized under the same four headings as in the case of Slovenia: purposes, tasks, information categories, and management principles built into EMIS. The organizational point here is based on suggestions developed by the two ideal typical EMIS models earlier in the thesis. The analysis is focused on those respondents' views which make clearer the course of development of EMIS in England

on the dimensions of fordist and postfordist EMIS elements. The fieldwork findings will be matched with those from Slovenia and the thesis' theory later in the thesis. The first group of EMIS elements discussed in the field were EMIS purposes.

5.4.1 Participants' understanding of EMIS purposes

"There is a whole lot more information coming in obviously," stressed one teacher (T2/1), "since I started working with the National Curriculum, [which] is far more structured", and he added that "because there are more instructions coming in, there is more information, and the instructions change more frequently these days."

The same view was shared with another respondent (T3/1) who said that the increase in information is mostly because "it has been so much more... coming from the government... various directives, various initiatives, this, that and the other... I don't like that." She feels that there is too much time spent on thinking how to put in practice those directives instead of "giving the time I should to what is most important... children."

Discussing the purposes of EMIS in relation to the government and its agencies, like OFSTED and SCAA, one headmaster (H1) said: "We receive information and that's it." He explained that although the communication with the government is "very much one way... we are responding to them. We get consulted and we give our views, for example the Dearing

Commission, we put our views on curriculum in writing. What we are allowed to do, there is a bit a light touch between the state centrally and schools on curriculum. There's a very wide division on what the school can do."[44] Another head (H3) commented: "We don't get very much from the DFE. Compared with what we used to get from the ILEA we have a very small number of circulars and documents now and some of them are very helpful. It isn't just notices to tell us what to do. They are very constructive documents sent out now."

The two main purposes of communication between schools and LEA were explained by one adviser (A1): "One is clearly having to ensure that schools [in the LEA] are meeting legal obligations, which is really a difficult task because it makes me a front for the government[45]... but [a second purpose is] also to a certain extent supporting the schools and give them ideas about how to manage it and the sorts of systems that will work. I mean, for instance, there's been legislation about reporting to parents. It changes quite often, what must be reported to parents... I have the task of informing. I mean, the circular goes straight to schools, so in theory, there's no role for me. But in reality, schools find it helpful to have somebody actually draw things to their attention. So you have this circular, and then spell out to them what it really means. Bring to their attention what it means, what it says, and how they could with the least disruption of what they're already doing meet the legal requirements."

The purpose of information system links in relation to LEA, like their general role in educational management, is ambiguous. As explained by

one adviser (A1): "National Curriculum is a centrally determined development and National Curriculum information and information about the tests and things like that in most regards go straight to schools. And then almost as a sort of a side thought, LEAs were informed."[46] In another LEA one adviser (A2) defined the purpose of the EMIS: "I am almost like a postman acting for the DFE. Everything that schools should have comes to me first, so that I can make double sure that when I go to schools and ask have you got X, Y, and Z, I know exactly what they should have. From that point of view I can just monitor, literally, the influx of materials and the distribution of materials, Although... it's quite clearly laid down in our legislation, that it is the ultimate responsibility of the headteacher to ensure that the National Curriculum is taught. We liaise very closely with all heads, particularly with all our primary heads. The model we would hope to say... is one of the partnership." She also explained that "a paper exchange of information [with DFE is] a rule."[47]

Within schools EMIS has several purposes. In the independent school as explained by one teacher (T3/2): "the system is there for it [passing information] to happen, whether it happens or not depends a little bit on individuals... in theory it should be quite good. The opportunity is there to get the information. Basically the housemasters who are sort of like one step down from the headmaster have a meeting once a week. And if there are certain things that would need to be passed down, housemasters would then have a tutors' meeting in his house and he might have, because all the academic staff would be a tutor in a particular house, so we would have a tutors' meeting in my house once a week and the housemaster would

perhaps pass on the things that come up at the housemasters' meeting, and it can work vice versa, I suppose, the other way round as well, information going upwards."

One of the purposes of an EMIS, suggested earlier in the thesis, is to follow policy implementation. LEA advisers are monitoring the educational policy implementation: "First of all by making sure that each school has got what they are meant to have", explained one adviser (A2); and because she is "also an OFSTED inspector... If any schools are in breach of any of the statutory duties I would know that because part of my work is looking at schools from that point of view and we've got a lot of backup information from the OFSTED handbook in terms of what is legally required to be done in schools." As an LEA adviser and an OFSTED inspector she can not inspect any of the schools In their LEA. "But we do prepare our schools when they are about to be inspected." In this sense she is able to inform schools about OFSTED requirements and OFSTED about policy implementation issues in schools.

Respondents' opinions of EMIS purposes also show that there is an important link between the political leadership of the borough and the control over education. In terms of communication with the LEA one head (H3) felt that "I would say it hasn't been a particularly valuable relationship. Members [of the elected borough council] have a lot of control over the officers. [Their borough] is very political, very right wing political and... sometimes they overstepped the boundary of the control traditionally and legally... members have over schools. They've interfered... And they

have actually interfered with the running of the school, which is not appropriate, or really legal I think. And they have undoubtedly have more influence on the officers, the director of education, more than perhaps in most boroughs."

One teacher (T1/3) explained that in terms of information exchange with inspectors much has changed since the ILEA was abolished. "When the whole London authority existed [it] had excellent inspectors, who would come in and give good advice to a headteacher... I mean they were just sort of people like, rather than just gods up there... [the] inspectors were coming and giving advice in a sort of friendly way; [while now] the small authority inspectors who came in weren't as good... they were okay in geography or history but in terms of how you run the whole school, they didn't have a lot... The OFSTED inspection again it's just a check on how you are doing. Now it's a sort of a very formal business... And I think that [the abolition of the ILEA] has been a major loss."

Since the introduction of the National Curriculum the government information links with schools are very indirect was a point made by one teacher (T2/3): "there were questionnaires sent out which we returned. There has been very little acknowledgement for the average teacher or the majority of teachers. Before the National Curriculum, during the initial stages, I went to several conferences, places like Oxford and I was involved in the debate. Really the government had already made up its mind about what we will have to teach."

One teacher (T3/3) explained the communication with the exam boards: "Since the examination boards have been privatized, they are far more interested in teachers... they are always very keen to take into account your views, or comments, or complaints. They are very, very good. It is a little bit like British Telecom or British Gas. Now they've been privatized. Not that I agree with that... but they are more efficient."

"In terms of monitoring what goes on," thought one adviser (A2) "we are still feeling our way through that. I think who's fault is it if the school is not delivering. Who is going to take the blame, is it the authority, is it the school? And there is all sorts of different mechanisms of trying to see, to examine that. Where authorities have an inspectorate, it's a very much clearer partnership between an LEA and a school about things being done", which is in her opinion not the case in LEAs without an inspectorate. In terms of government information collection, she commented, "DFE makes up their own rules about what they want, yes they can, because there is a statute behind it. I think they get whatever they want from schools." The LEAs therefore have to give to the DFE "the information they require - the league tables being perhaps the most contentious of all issues. The DFE... are making it a legal requirement to publish results, a legal requirement to hand results to the DFE. There's [also] a legal requirement to fill in your register every day and to record number of absences and exclusions... you have to stay within your budget, you break the law if you spend too much. Also, I think it is a closed shop... No escape."

In the theoretical part, this thesis discussed links between educational

efficiency and quality and EMIS. It was suggested that in a fordist EMIS model one of the purposes is to support efficiency which would be monitored through quantitative indicators. In the postfordist EMIS model information about quality has been emphasized. Many respondents have commented on a relation between efficiency and quality in the present educational system.

One teacher's (T1/1) opinion was that they "have to be efficient. Because we have to manage within our financial limits and try to get the best out of the money we have got. On the other hand you still want quality. I think they go hand in hand. Years ago we were not too concerned about efficiency we were far more concerned about quality... quality of the teaching... we let the authority think about efficiency." In their school the concern for quality is shown in the fact that they have a very high cost staff,... staff who are very experienced, and who bring "a kind of qualitative balance."

Another teacher's (T4/1) perception was: "quality leads to efficiency... You won't have efficiency without quality, you may have quality without efficiency... I think people are more accountable now through the various systems of management. I think there is more accountability. Which probably isn't a bad thing." One head (H1) was of a similar opinion: "it's important that efficiency measures and qualitative measures are seen as separate issues. I also think they should be linked... the national judgement... on efficiency is based on value for money. Is the school delivering value for money in terms of how it spends its money?... that is

a quantitative type of judgement... In terms of quality... I think it's much more complicated. Now you've got to go beyond simple value for money... Efficiency is very much a national measure to do with comparisons with other schools and with targets that are set nationally. In terms of qualitative judgements I think that you have to come out and say what are the standards that we are aiming to achieve and measure against that."

Quality assessment is for another teacher (T2/2) "looking much more into the value added. You measure a child when he comes into the school, and this is not just measuring in terms of grade A and B, [it] is how much the child has actually improved." Measuring quality is very difficult, he admitted, because "it is not just the academic quality, it is the quality of the professionalism... the enjoyment derived by the students, all the drama, the music and the sport, that's I think what parents are looking for in quality in the school. They are looking for a whole."

The introduction of the "National Curriculum, the emphasis on the exam statistics, figures to be given for attendance and punctuality, OFSTED inspections, all of this makes you more aware of your public image. You have an open enrolment. You have to work towards being effective and efficient." described one head (H3). And one teacher (T1/3) was of the opinion that "there is more rigour now, because of the testing." and this for her shows more quality.[48]

One adviser's (A1) opinion was that "the local authority [should] look at its schools to see what quality it is and to improve the quality of their

schools," which is not the case in all LEAs. Talking about efficiency the same respondent mentioned the OFSTED manual; "in there is a section called efficiency, which is a section which has to be written into a report and it is quite interesting to handle that, because their definition is quite a broad one. There are two aspects to that definition, one is... financial efficiency... But also within that section is a much broader view... is this school clear about its aims and about what it is trying to do? Because only if it is clear can in any sense it be regarded as being efficient."[49] The same respondent also commented: "There's increased government spending in education but a huge amount has gone on the production of the tests and the marking of the tests and if you set that against the money that could have been spent on quality... In other words the money is gone to the agencies so they can employ people to mark the tests. This was not new money that the government found. They took it from a pot that previously would have paid for dozens of local teachers' meetings. So I think that's a pretty clear indication of what the central government or the politicians think is the more important."

Respondents comments show that there is a mixture of fordist and postfordist EMIS purposes in the educational system. Their opinions also make clear that governmental expectations towards EMIS differ from those of LEAs and schools. The findings will be compared with those in Slovenia and theoretical propositions later in the thesis. The next area of the fieldwork analysis is the EMIS tasks.

5.4.2 Main EMIS tasks that are or should be performed

Theoretically the thesis suggested several tasks within fordist and postfordist EMIS models. In brief, it was suggested that in the fordist model the main tasks of the information system are centrally defined information needs and objectives, information collection based mainly on statistical data, centralized storage of information, limited communication and dissemination of information mainly through governmental publications. In the postfordist EMIS model, information needs and objectives are defined by different groups of people, collection of data is based on qualitative methods, there are multiple information sources, and ways of information communication and dissemination. The following fieldwork analysis looks at respondents' views about these tasks.

One of the tasks that every EMIS has is, in the theoretical proposals of this thesis, defining the information people need in the educational system and to set objectives of EMIS. Within a school, as indicated earlier in this chapter, it very much depends on individual skills, how the information needs are expressed (T3/2). While on a national level, because of the national requirements and their statutory position, "DFE make their own rules about what [information] they want" (A2). Respondents in schools did not give any evidence that they can influence the definition of information needs on a national level.

Some LEA advisers tend to influence data collection on a national level. One adviser (A2) indicated that: "we do work with the test developers...

[and the] National Foundation for Educational Research. Through conferences, through debate, through discussion, we help them to gather their information and suggest ways to improve. We work with test developers and each university that is responsible for preparing the tests and give feedback about how well have they've been received, what problems children would have with various questions. I think we have an nonformal influence there." They are not using academic research in that respect "which is a bit of a pity", she concluded.

In terms of the next EMIS task, the data collection and analysis, there are different approaches throughout the educational system. Schools keep and regularly update staff appraisal records.[50]

Teachers can influence the information collection about students which results in so called 'Records of Achievement' at the end of each year. The same teacher as before (T2/1) said that these data are mainly descriptive. "In the staff books will be numbers, percentages or whatever, but the Record of Achievement will make statements about each subject. So on a mathematic sheet will say something about his capability, how he handles himself with new topics etc." This sort of information has improved a lot.[51]

Descriptive reports can be also ambiguous, pointed out one adviser (A1). "A classical example it would be: if you are a secondary school maths teacher and you received two children from different schools, and if the report you received was a descriptive one, saying that this child was very able at this particular aspect of maths, and another child very able at this

particular area of maths, you might assume that they are of equal ability. But this need not be the case." The National Curriculum with its level structure, has for him, made records more comparable, but has also increased teachers' workload.[52]

The reporting work has also increased in the independent educational sector and it tends to be sometimes even more difficult because "in a boarding school people do tend to be a bit protective about... information about certain people" (T3/2).

The opinion of one head (H3) was that, on the national level, the emphasis in data collection is on exam statistics, figures on attendance and punctuality, and OFSTED inspection criteria. The same was the view of one adviser (A1) who said that schools "have to do that for the government and we as an authority we get the things together and then send them off to the government. So we do have this information. It is an interesting point... because I am quite heavily involved in trying to get our LEA to make better use of that information."

The next EMIS task discussed with the respondents was the storage of information and information sources. Information about national issues in education can for one teacher (T1/1) be found in government publications. A lot is available, he said, but unfortunately there is not enough time to follow this information regularly. Within schools, he further commented, "we put in a networked computer system." In contrast, in the same school, one teacher (T3/1), said that her main information resource are "either the

pigeon hole up in the staff room or the register, and phone messages which are recorded on a board." The information from outside of the school is mainly found on the notice board. The head of the same school (H1) also mentioned a weekly bulletin as a recently introduced source of information.[53] Different information sources are used by one teacher (T2/1) because "It all depends on what kind of information I need."[54]

When deciding about their secondary education, all interviewed pupils (P1, P2, P3) agreed that they get the majority of information nonformally from their parents, other pupils, and teachers. But when deciding about life after secondary education pupils in two schools (P1, P3) write to the universities individually and they get brochures with all the necessary information. Some of them, after finishing the secondary school, stay a year in work "to get some money and to get some experience before going to university." They only start to collect the information about their future career in their last year of secondary school. In another school pupils (P2) have a careers office and they found it very useful.

The last task discussed with the participants was information communication and dissemination. Respondents seem to be generally satisfied with the communication of information in schools. Within one school the introduction of the computer network is for one teacher (T1/1) a step forward to improved communication and a weekly bulletin passes important information to staff. "The students have year councils, [and] they communicate that way; [or] there are assemblies every day for every year group", he added. Innovations in [the same] school information system for

one teacher (T2/1) mean that "it is easier to communicate in both directions." Within their school there is a very good communication with parents and the career's officers.

The best way to communicate within a school for one teacher (T3/1) is personal contact. "Often I get an immediate response, which is what I want. If I give out any bits of paper it may take 2 or 3 days to get them back", she explained.

"We have various [information] systems, but they are highly dependant upon how staff are going to use them." commented one teacher (T4/1). "Some staff use them very well, some staff keep information packs, others don't. It's a human thing isn't it... [but] when it's necessary to take action on things, unless you've got the information there, not just the information relating to a specific incident but the background information as well... if you haven't got the information, your hands are tied." His opinion was that the more information they have got, the easier it is to react. The information also has to be "documented,... it's no good just passing us in the corridor and saying hey such and such happened. It has to be written down. So we've got the evidence for whoever needs to see it, perhaps the authority or whoever."

In a small school (with 500 pupils, and 60 staff) communication is easier because "Everybody knows everybody in the school... we all meet up at breaks and it's very easy to get hold to people", said one teacher (T2/2). In their school everybody is informed, involved, and consulted at various

levels either through the main committee structure or through their departments. "I think that this is important that everybody could have an input and felt that they were consulted", was the view of the same teacher. In the same school one teacher (T3/2) commented: "In terms of teaching [my subject], yes, I've got enough information... And if I haven't got enough, I know where to get it... There are other areas of school life, like school policy, which I am not particularly involved in... It would be nice to be more involved in it... As a member of staff there's always a sort of feeling... that [there's] not enough information... You feel you ought to say 'enough is enough' really."

The communication with other schools in the area exists but it is not very satisfactory. One head (H3) indicated that heads "do have regular meetings [but]... being a London head is very difficult and stressful. I have tried to make us a more united group. But we all have different problems... It has taken a long time to find how we can be of use to each other... Since the demise of the ILEA, there is this slight, how can I put it, there is less trust [and more competition] between heads." Very few teachers communicate in between departments, she further explained. "I would like much more. The science teachers meet, and the English teachers meet, but not very often again. We ought to share more good practice but it doesn't happen... There has been a retreat inward, a greater insularity since 1990 with the demise of the ILEA, that is one of its effects."

There are also teachers who feel that they do not need more communication. One teacher (T3/3) said: "my job is to teach the children

to pass the exams to the best of my abilities; that is my task and as long as I've got the books and the equipment and the support from other teachers then that's my task done. I mean there is no need in my position to have contacts in my ordinary job."[55]

Focusing on pupil-tutor communication one teacher's (T4/1) view was that it is satisfactory. The tutors meet with pupils in a class but also "every day for fifteen minutes at the beginning of the morning and in the afternoon... and then there is one lesson a week which is... pastoral and social education... they work through a social programme."

Between different LEA offices the communication for one adviser (A1) is not an optimal one: "Within the LEA there are the inspectorate, the group called monitoring and development, there is a budget section, there is a personnel section, there are lots of different sections and they are not good at communicating, not good at sharing, and this is a classic case. There ought to be one body that is responsible for gathering information that everybody else could have access to." Commenting on the curriculum and its criteria of achievement, he said that their introduction has been of much benefit for school communication. "The long term benefit of it... has been... passing on the information through schools, between schools; people are now talking to each other and not as earlier... Before very little has been passed from one teacher to another in terms of pupils achievement... [although] people have kept quite good records".

To improve the communication between schools and LEA, many local

authorities are developing computer networks. They have got a lot of interesting information on their computer, explained one adviser (A2) and "each school has its own, all of their information and records on computer... we are working in consultation with the heads... [on] exactly how much information we are going to share." She also thought that there is enough information already gathered and that the problem is to find it out.[56]

Many schools have different ways of communication with LEAs. One head (H1) commented: "With the local authority there are specific links. We have special units which are LEA units for children with special educational needs, and the direct contact with the staff of them. We have the SIMS system... which is directly linked with the school and the LEA. We have E-mail links, all that... Also I tend each month to meet with all the other secondary heads in the borough, with LEA representatives... developmentally about standards, about curriculum policy in the borough. But beyond that we try to keep the links as slim as possible, we are a self managing school." "We receive information and that's it", was his explanation of communication with the higher levels of the educational system, DFE and other agencies.

For one teacher (T2/1) communication with the community is very good: "we have a lot of input from the local community... we have [also contacts]... with local vicars... [and] we have contact with local businessmen through... [pupils] work experience. Year 10 go out for two weeks and in the sixth-form most of them go out and also do some work. So we have a lot of contact... with year 10, we've got local businessmen come in... and

have groups of three pupils talk to them about how the school links with the outside world... So I think we have quite a good setup."

Among the suggestions that respondents put forward in terms of better communication the most evident was the one supporting more computer network development. The participants did not give any suggestions about how communication between schools and that between schools and government be improved.

5.4.3 EMIS categories discussed in field

The two ideal typical EMIS models propose that in industrial social settings, compared with postindustrial, different information collection categories are stressed. The participants were asked to comment on the availability of different information categories.

The information category including programmes and curriculum issues has expanded enormously since the introduction of the National Curriculum. One teacher (T1/1) said: "The programmes and equipment have changed every year so far... There is information coming in all the time." Almost all teachers commented along the same lines as one teacher (T4/1): "there is more coming through... [and] we do get more structured information from them [DFE] now." That the information about the curriculum is very structured was also the opinion of another teacher (T2/1): "Now you are talking about levels. You are saying 'this child is working toward level 3,

this one is working toward level 7.' So it is much more individualised where the children are concerned. So that is much more structured, much more dictated." This new information is very difficult to pass to the children and parents, explained one teacher (T3/1), because this information is "absolutely meaningless at times; I mean a kid asks you to explain what level 3 actually means. Even if you read it out to them, they will still not understand [and] when parents ask you what level 3 is, you don't know what to say... At the end of the day... most teachers [could do] without the constant expectations and guidelines." He definitely thought that there is too much information related to the curriculum.

In an independent school one teacher (T2/2) commented that by collecting different information they are trying to broaden their curriculum, but are also very selective. The respondent, for example, said that he is more interested in information about teaching methods than in the content of teaching.[57]

The information related to the curriculum is for one adviser (A1) "far more explicit than it's been before and everybody is trying to cope with interpreting the National Curriculum, but at least they are interpreting the same thing. Previously, all schools and all departments within schools were going their own way and they only come together in terms of examination syllabuses where people from different schools talk together e.g [about] history... There is certainly a far greater level now of common language about curriculum." Another adviser (A2) commented: "For me programmes and curriculum.... is a very, very big category of information; I mean it's

massive. I would say that the that [this] information is easily available to me and accessible in a form - either in my head, because I know what they are teaching... or it is in the form of a document that the school has. In fact all of this information, all six categories [from the list] are contained in the school development plan, that we help the schools... to put together."

The second category of EMIS discussed with the participants were records on students, staff, and institutions. This information is for one respondent (T2/1) "far more detailed now, because you have to know exactly where they are in the National Curriculum and staff... are being appraised [regularly]... Staff and personnel issues... that has been computerized."[58] In relation to students, said one teacher (T3/2) "We have an awful lot of reporting we have to do."[59] In the public school "There's no staff grading, staff assessment... you can't do it."

"One particular area which at the moment we are trying to get to grips with is to do with transfer", said one adviser (A1) and explained: "What information ought to be transferred from one school to another when a child moves... And this is an issue that we've gone round and round... and it's not just a recent one; it's a perennial one, certainly in English education." For him another problem related to student records is that primary schools often think "how much effort should [be]... put into the student reports... Because they are suspicious. They don't think the secondaries read them. And in fact I don't think they do at present. The secondaries argument is that 'we don't read them because they are all different. We get... people coming to us from thirty three different schools,

we can't cope, they're... all written in different ways'. So we're trying to come up in sort of a standard form which everybody can use."

The third information category, respondents commented on, was that of student achievement and criteria for achievement. This category of information has for one LEA adviser (A1), who is also an inspector for assessment, "changed quite dramatically."[60] Ten years ago, he explained, it "was quite random really what schools were assessing and recording in terms of student achievement. There was a movement towards records of the achievement... [which would] broaden the view of student achievement." The idea was "to get teachers to be more clear about what are they actually assessing, what the criteria of assessment were. That side has now been taken over by the National Curriculum [which] has certainly brought... far more consistency in assessment of achievement of pupils in curriculum areas." In the same respondent's opinion, the effect of the National Curriculum "has been good in terms of concentrating people on academic subjects and their assessment within academic subjects, but I do think that this has been to the detriment of the previous movement towards the broader view of achievement, personal, social, and cultural. Quite strongly in primary schools.[61]

Students' achievement and criteria for achievement, commented one teacher (T4/1), "is something that's ongoing, that's improving all the time. I think National Curriculum has brought that... [and they are teaching now] more along those lines." The same respondent also pointed to a problem in this category of information: "The information that comes from the primary

school is crucial... and it's something that's very thin on the ground at the moment. The time we get it isn't very helpful", it is late.[62]

The records of achievement brought into schools with the National Curriculum have been extended to other areas of individual and institutional achievement. One head (H1) pointed out that in this sense tutors have to be concerned now with the behaviour of children, contacts with parents and they are also "responsible for how well children are doing across subjects." In their school they are trying to set targets for courses and for children, using a pastoral system in the school. "So there are institutional targets, targets for the year group, and targets for individual children."

The fourth category of information collection discussed in the field was evaluation and other research related to education. Respondents seem to have quite different views about this information. One teacher (T2/1), for example, said: "I think that there is more information on research coming into schools on the whole than there has been before. Whether we get enough time to read it is another thing... It is there, but unfortunately, we need 48 hours in a day, and not 24"; while another teacher (T3/1) commented: "There is also very little on going research, stuff that should be available to you, and nobody seems to be responsible for monitoring it at all." Some other respondents were of the same opinion.[63]

Within the school, the head (H1) explained, it is the "deputy head [who] is in charge" of that category of information. They are also using consultancy

from the private sector to bring expertise from outside into school on issues like equipment for food and nutrition technology and also for staff development. For the same respondent it is very important to have access to this kind of information but the use depends on what the school priorities are.

One teacher (T2/2) gave an example of how research can contribute to the innovation process in the school. As a head of the department, the respondent tries to keep up to date by attending different meetings [e.g. examination boards] "and then they can bring the ideas to their departments... for example there is a movement towards a modular examination rather than the more formal A Levels. I started in [her department]... Then after a discussion it would be implemented and it is interesting that from [one department]... it's now moved across to [other subject areas]." The new initiatives are coming from many in the school. And then it is also the headmaster, who "receives lots of information from the DFE and examination boards and he would read that and digest it and he would pass it on to relevant people... either director of studies... or relevant heads of departments." About their involvement in the research she commented: "I suppose we could do more, we tend to be quite insulated, just get on with things... I don't suppose I have come really across research, external research I mean."

One adviser (A1) said: "in my role [the information about research] has had very much influence... [but] I think that far less than in the days nearby ten years ago where there was no National Curriculum... firstly, there was an

awful lot of research going on about assessment and what teachers did and how teachers created the set up criteria and how they shared them with pupils and cetera. Since [the National Curriculum] we've been swamped with the practicalities of keeping records and administering tests and were the tests made and how they've been done and how can they literally be administered, and far less influenced by evaluation or research. There have been some research projects and many of them are quite critical of the system that's been constructed. But it doesn't seem to be having any effect. The main bodies of the research that we and schools get involved in are small scale, in the sense of small focus... They are not radical ones such as I think some of the Bristol ones have been, that looked at the whole stage one seven year old tests and found that they were totally unreliable in a sense that they were administered in totally different ways in different classrooms. The teachers were doing them in different ways so there was no way that you could claim that they are objective and teacher free. They weren't at all... they varied hugely from one school to another. An interesting piece of research but it has not affected the government at all in any way. They've just ploughed on with their next move. The things that influenced the government have been clearly teachers' actions. Teachers saying 'We are not going to do them!'; then they find a way of reducing the size of the tests or altering something slightly in order to reduce the workload. I don't think that any government policies were affected by research." The same respondent (A1) was also of the opinion that the whole picture is not so dark, "because obviously through my advisement role then I have a position where I can help, support, I can promulgate ideas."

The view of another adviser (A2) on the same category of information was: "We do our own evaluation and monitoring when we go along. But then we also relate to the DFE and SCAA in terms of attending the conferences and having feedback, responding to questionnaires and do all that. In that sense I can say I am aware of what research is going on, what other people are thinking about this, whether or not this has been seen to be valuable or not, and what people think about it."

Information related to financial matters in education has also increased, especially within a school. Since schools are in charge of their own finance, school staff is much more informed. One teacher (T2/1) commented: "Staff are involved more, because we have a committee which has normal teachers as well members of senior management... [they all] have an input on how the finances are spent."[64]

As a school governor, one teacher (T4/1) considered herself to "probably know more about finance than the staff in general. I mean that's fairly readily available to me, it would be to other staff through me, if they are sufficiently interested to ask about it... there is no secrecy."

A teacher (T3/2) from the independent school indicated that: "I don't really get involved in finance. The only thing we spend money on is the textbooks. The main financial part of the school, I don't really get involved in it... I wouldn't get involved in making decisions in any major expenditure at the school... I don't have any particular desire to actually run the financial side of the school, that would be a different type of task

really, I am here to teach a subject, and to do other things as well, of course, but I am not here to manage the school."

Within their LEA, explained one adviser (A1), they are organized in different sections. there is also a budget section "and that information, you know, is not easily available. It is available but you have to go and search it out or hunt it out... we can get access. It's not like it's hidden from us... but we don't automatically get it... Ideally we would have a central section that would be responsible for the data collection and creating some sort of school profiles. That would just tell us basic information. Among the basic information would be how much is delegated, how much is being retained from previous years, what staffing levels are, etc." The same respondent also said that he wouldn't know how the money is spent on the national level "not in an official way, although we are aware how much money we are given by the government and we are aware how much they are giving to everybody else. These figures are published. So the amount of money that is given to schools, the government grant is published", but how different LEAs spend it is not clear at all. The government, for him, has got an overall view of how the LEA grants are spent. "And it is interesting that some LEAs spend more... and some do actually spend less, because the local authority receives the money from the government and it is up to... the local authority how much is spent on education and how much on the other things. And it is possible that an authority might decide, even if the government grant is for example 2500 pounds per child, 'we are going to make some savings and build a swimming pool.' Those figures are available as well, retrospectively, how much money has been spent on

education as opposed to other projects." Another LEA adviser (A2) commented: "Schools are financially independent, as I said, local management is fully instituted here. However, we've got very strict oversights on each school's expenditure." Another respondent (H1) pointed out that the schools spend different amounts of money per child and that this information should be available to everybody.

The respondents were also asked to comment on information about the legal issues. Both the LEAs and schools are sent all copies of legislation from the DFE. It often happens that schools need some expertise on that, like authority advice and the advice from heads' associations.

Within LEAs there are sometimes difficulties with this category of information, explained one adviser (A1): "they [the DFE] send one copy to the director of education and then it is up to the director to decide which offices is this to affect, and to get it to the right places, and that doesn't always happen. Because if there is a piece of legislation that affects budgets, but also inspection, and also personnel or something, then the copy doesn't always get to all of those places. It might come to the first of them and get stuck there and so other bits of the authority can't hear about it." He also pointed out that the DFE "are sometimes informing the LEA at the same time as the schools and sometimes slightly after the schools which is a problem if there are the issues there that schools want to talk about straight away."[65]

A teacher (T1/1) expressed the view that teachers are aware of all the main

legal issues; and the opinion of another teacher (T3/1) was that this information "has always been accessible but we hardly ever used it"; while the third teacher (T2/1) said: "I really do not know much about it."

In terms of how the importance of legal information has changed in recent years, one head (H3) explained: "We need to know far more about employment legislation. Previously the LEA would deal with teacher redundancies and things like that, now we do it. And we know far more about contracts... cleaning staff, catering company, as well as the staff here. So my knowledge of employment legislation has increased."

Information about legal issues was the last information collection category explored in the field. Respondents' answers show an increase of information in almost all categories but above all in the categories of information about the curriculum, assessment, and finance. The analysis continues with the participants' views on EMIS management principles.

5.4.4 Principles of educational management built into EMIS

The final part of the analysis focuses on respondents' opinions about some of the educational management principles built into EMIS. Theoretically, this thesis claimed that the fordist EMIS model differs from the postfordist in terms of management principles. Three were suggested: the nature of communication flows between different parts of the educational system, the relation between formal and nonformal communication and, centralization

and decentralization of EMIS. These principles were explored in the field; the findings will be compared with those from Slovenia later.

In the theoretical part this thesis suggested that information flows vertically and horizontally through educational system and that it can be one or two way. One teacher (T1/1) commented on students' communication: "The students have year councils... and they communicate that way; there are assemblies every day for every year group." He added that assemblies are one way communication, from teachers or heads to pupils; while "the year council is the other way... pushing information to us... so it is well balanced." Pupils (P1) from the same school explained that communication varies. Those pupils who are just before the exams do not communicate a lot. The communication with teachers "mainly depends on the teacher"; the best communication flows are there where the teacher acts "as a friend. At least that's what my English teacher is about. You can talk to them about anything." But there are also teachers with whom "you just have to be careful when you talk to them", concluded the pupils. Very similar were the opinions about communication flows between pupils and teachers in other schools. The communication varies, said pupils (P3) "it depends really who you like and who you don't..."; they like teachers who are "down to earth" and not so strict. Very strict teachers discourage them. In another school pupils (P2) indicated that to see a headmaster is not a problem but they do it rarely. He is a very high authority for them. If they have a problem they go to the tutor.

There was very little evidence about the nature of communication between

pupils from different schools. In one school (P3) pupils do get the opportunity to communicate "mostly because we are in a sort of circle with another two schools in this area." The six-formers are mixed together in different classes and they meet there. Other pupils have not got any contacts.

Commenting on communication flows with parents, one teacher (T1/1) said that "communication has improved radically over the last few years. Communication exists between the school and parents; the reports and the booklets and the information that goes out to parents, so that they are aware of what is going on, and I think that the biggest difficulty in communicating with parents is on how to get them to communicate with us." In his explanation this communication is very much one way. Another teacher (T2/1) sees the same communication as "working out very well. This is because the... tutors... contact parents... [which means that] it is easier to communicate in both directions."

The communication between primary and secondary schools depends very much on the secondary schools. In one school they appointed one teacher to liaise with primary schools. Every year she visits most of them but they also communicate "by telefax". This communication is considered to be horizontal and two way.

Independent schools communicate through "various organizations [that are] set up", explained one teacher (T2/2) and added that "There's a group of independent schools which meet up together at various levels, for example

the junior head teachers... or meetings of second masters... But also we have meetings with the Boarding Schools Association... There are Headmasters' Conference group meetings. I think it's the 230 independent schools whose headmasters are elected to this conference and this group arranges meetings for various levels... and you can share your problems at that level... But the links we have with other state schools are not so strong unfortunately."[66]

In one state school a teacher (T3/3) also considered that communication with other schools "is very weak", but he does not think that this is their fault. "When it comes to planning and work schemes we do it ourselves... we are sort of a fairly self contained unit." Another teacher (T1/3) commented: "I mean that would be limited in a sense. Although it works out in another way because we send more people out on INSET now than we did before"; and the third teacher (T2/3) said: "[we] used to have [their subject] teachers forum. And I used to attend them quite regularly. But I haven't been informed of any meetings [lately]. Let's be honest I am just simply too busy to create that sort of thing or to chase up other schools. We have done a task quite well, get very good results and we just work on our own basically." She said she does not miss this kind of communication: "I didn't find I got very much value in talking to teachers from other schools. Quite often I didn't agree with what they were doing or how they were doing it. I'd rather just get on with it my way working with my department. I've got a very good department and new people full of good ideas as well."

Within a school, the communication between heads of the year teachers is

for one head (H1) "both vertical and horizontal"; on both sides they can come and give feedback through different meetings.

Communication flows between schools and government is weak as well. "They seem to be very much apart", said one head (H1). The only direct communication is "through inspection, only through OFSTED", who come to school approximately every four years. The communication flows between government and schools are considered by the same respondent to be vertical and one way: "Very much so, very much so. But I am not unhappy about that providing it is a light touch. What I don't want is a system they've got in France where there is effective control from the Ministry of Education." Another head (H3) said that there is very little communication with the DFE; it exists in the form of the DFE sending documents and circulars. Not much better communication flows exist with the LEA, said the same head.

"In a very basic sense," commented one LEA adviser (A2), "there is direct communication between what the government wants... and what schools do. And you've probably heard about the Ron Dearing review?... that was one of those direct links... between the officers of SCAA and schools." The communication between the government and LEAs is very weak, she said giving an example: "if you think about the key stage one, which is the one that has been running the longest, this is the DFE, very strong, missing out the LEA."

Information flows can be also formal and nonformal. In this respect one

teacher (T1/3) pointed out that "the secondary heads association [as] a sort of heads... union... from all over London... is a mixture of formal and nonformal meetings. I mean people talk about what their concerns are. And you don't get that through the authority or the support from the authority. It is the heads and deputy heads who do it for their own interest really... it is a national professional organization, but it is quite a small one, and effective."

Within a school, explained one teacher (T4/1), there is a lot of nonformal communication. In a sense they are trying to make it more formal. His comment, already quoted on previous occasion[67] in the fieldwork analysis, was: "we must have it documented, you know it's no good just passing [the information] in the corridor and saying hey such and such happened. It has to be written down. So we've got the evidence to whoever needs to see it, perhaps authority or whoever." One head (H1) commented that there are "two main means by which we communicate in the school... First there's paper communication and there's verbal communication... it's formal and I'd keep it that way but it's a definite responsibility, people are accountable for the task. Not the meetings, the meetings are quite friendly, [but still] very formal but they operate within a framework... it's all a bit too hierarchical."

In one school the present mixture of formal and nonformal information flows "is messy because it leaves ill defined the relationship between the heads of departments and the headmaster... [and] housemasters." They actually communicate nonformally and formally only through one person

which "can cause difficulties because you end up with the situation when the housemasters would obviously talk individually to heads of departments all the time. And the nonformal relationships are usually pretty good."

Communication with other schools was explained by one teacher (T3/2) saying: "I would pick up things from other schools by just sort of nonformal contacts... when we have matches and we chat." One adviser (A2) commented on relations between schools and governmental agencies as being very formal with communication only in a written form. The respondent also indicated that relations between LEA and schools "fluctuate between formal and nonformal in a pretty decent balance."[68]

The last management principle discussed in the field was the centralization and decentralization of EMIS. EMIS in the independent school seem to be rather centralized. Much of the information tends to be collected by five people at the top of the school management - be this the information from outside or inside the school. One respondent (T1/2), for example, explained that their school in this respect is "rather different..." from other schools. The EMIS, for him, is also hierarchical so some levels within a school hierarchy feel "side-lined" in information communication. Another teacher (T2/2) in the same school commented: "obviously the headmaster receives lots of information on the DFE and examination boards and he would read that and digest it and he would pass it on."

The centralization of information system, like that of decision making, can

have quite serious effects on relations between different parts of the educational system. One adviser (A1) noted: "the policy trend is clear in the sense that they [the government] would like to ignore LEAs if they could and just have central government and schools to deal with directly... [and the] grant maintained schools [are] a sort of logical extension of that. But what they [the government] find is that actually they don't have the infrastructure to do this, so quite often they call LEA or they suddenly... gain interest in [communication with the LEAs]... [e.g.] testing... it was basically that they'd suddenly come across a problem and they didn't have a system to cope with it, whereas LEA's systems still exist. So they said, 'well the only people who can do it are the LEAs so we'll throw it to them'."

Respondents thus considered that EMIS in a private school is centralized; while the present position of the LEAs was seen as contributing to a decentralization of the EMIS on a national level. Centralization (and decentralization) of EMIS was the last management principle and also the last theme of the fieldwork analysis.

5.5 Conclusion

An analysis of the recent English social and educational reforms, and of the fieldwork conducted in England, was the central concern in this chapter. To make the comparison between the two countries possible and to enable the comparison between the theoretical framework of this thesis and the

fieldwork findings, this chapter was organized in the same way as the previous on Slovenia.

In the first part the chapter discussed some specifics of the English postindustrial economy, its effects on social developments, and some major trends in the politics of the Conservative government in last fifteen years. Within this social environment, the chapter showed, education has changed dramatically.

The changes that have occurred in educational management and in EMIS were explored in English schools and educational authorities. Participants' comments and critical views illuminated the complexity of recent educational developments and pointed to some pitfalls of political decisions in education. The second part of the chapter was the analysis of the fieldwork. The analysis and interpretation of participants' views were organized through the main categories of the theoretical propositions about educational management and EMIS to enable this thesis to make comparisons with the findings from Slovenia and with theoretical suggestions. This will be one of the jobs in the next chapter.

5.6 Notes

1. Lawton, for example, writes that "many analyses of change are incomplete because they regard education in isolation rather than as part of a complex pattern of social, political, economic and cultural developments."(p.41)

   Lawton, D. The Tory Mind on Education 1979-1994. London: The Falmer Press, 1994.

2. Learning to Succeed: A radical Look at Education Today and a Strategy for the Future. Report of the Paul Hamlyn Foundation; National Commission on Education. London: Heinemann, 1993, p.19.

3. Bash, L. and Coulby, D. The Education Reform Act: Competition and Control. London: Cassell, 1989, p.4.

4. Coulby, D. 'From Educational Partnership to Central Control'. In Bash, L. and Coulby, D. The Education Reform Act: Competition and Control. London: Cassell, 1989, p.3.

5. Lawrence, I. Power and Politics at the Department of Education and Science.London: Cassell, 1992.

6. Lawton, D. 'The National Curriculum in England Since 1988'. In Carter, D.G.S. and O'Neil, M.H. (eds.) International Perspectives on educational reform and policy implementation. London: The Falmer Press, 1995.

7. Lawton (1995, op.cit.) explains that "by the 1960s the consensus was wearing thin: the cost of education service was increasing, and doubts were voiced about 'value for money'. Worse still, in the late 1960s, there was a group of right-wingers within the Conservative Party consistently criticizing education policies, not only on grounds of cost, but also for social and moral reasons: progressive education was allegedly encouraging undesirable attitudes in the young, such as lack of respect for authority, bad manners, and indiscipline, as well as sloppy standards in English, maths and other subjects."(p.45)

8. Lawrence, op.cit.

9. Lawton, 1995, op.cit., p.44.

10. Coulby, op.cit., p.3.

11. Lawton, 1994, op.cit.

12. Lawton, 1994, op.cit., p.37.

13. Offe, C. Contradictions of the Welfare State. Cambridge, Mass: MIT Press, 1984.

14. Lawton, 1994, op.cit., p.43.

15. Lawton, 1994, op.cit.

16. Learning to Succeed, op.cit., p.20.

17. In Londonderry and in South Tyneside the figure was 19.4%. Source: Learning to Succeed, op.cit.

18. Learning to Succeed, op.cit.

19. Source: Social Trends 23, 1993 Edition, Table 5.18. Quoted in Learning to Succeed, op.cit., p.20.

20. Learning to Succeed, op.cit.

21. Learning to Succeed (op.cit.): "Information about redundancies shows that managers and professional and technical workers are much less at risk than manual workers."(p.37)

22. Howarth, M. Britain's Educational Reform: A Comparison with Japan. London: Routledge, 1991.

23. ibid.

24. Hough, J.R. The Education System in England and Wales: A Synopsis. Papers in Education. Loughborough University, 1991, p.14.

25. Hough, op.cit.

26. Learning to Succeed, op.cit.

27. Learning to Succeed, op.cit., p.28.

28. See for example: Coulby, D. and Bash, L. Contradiction and Conflict: The 1988 Education Act in Action. London: Cassell, 1991; and Bash and Coulby, 1989, op.cit.

29. Coulby, D. 'Introduction: The 1988 Education Act and Themes of Government Policy'. In Coulby, D. and Bash, L. Contradiction and Conflict: The 1988 Education Act in Action. London: Cassell, 1991, p.3.

30. ibid.

31. Heller, H. with Edwards, P. Policy and Power in Education: The Rise and Fall of the LEA. London: Routledge, 1992, p.28

32. Bash, L. 'Education Goes to Market'. In Bash, L. and Coulby, D. The Education Reform Act: Competition and Control. London: Cassell, 1989, p.22.

33. In this chapter the reasons for, and educational management changes, are analyzed together because the respondents' answers included both at the same time; and also because very little evidence has been gathered from respondents in terms of what were the main reasons for recent changes in educational management.

34. The respondent continued explaining in more detail: "They [the members of the committee] actually have conflicting interests. Because we wanted to change the balance within the curriculum to more teaching and less homework... We were constantly short of time in the classroom. So, the heads of departments, the academics, wanted more teaching and less prep. The housemasters were not very happy with that. Less prep means that every evening in the houses instead of quietly sitting during their prep, the boys would be getting around and needing a lot of supervision. That made the housemasters' task more difficult and they were opposed to it. Those things went back to the committee to modify them and we managed to strike a satisfactory balance between the academic departments and the pastoral. It ended up with more teaching time ... The other thing was the length of lessons. They are 40 minutes... We are going to have 43 periods week, with each period 35 minutes. So it's more lessons and each one is shorter. This has made easier to provide double periods, given us much more flexibility and we are not short of time." They have also increased the number of compulsory subjects (from 5 to 7) and decreased the number of optional subjects (from 4 to 2)."

35. Another headmaster (H2) sees the main reason for the management innovations, especially in the curriculum area, in "new demands from parents... [and increased] requirements of the exam board." And one teacher (T1/3) mentioned that the publication of the league tables increased schools' efforts towards being more successful which in turn requires different management of schools.

36. Dearing, R. The National Curriculum and its Assessment. Final report. London: School Curriculum and Assessment Authority, 1994.

37. Learning to Succeed, op.cit., p.49-50.

38. Dearing, R. The National Curriculum and its Assessment. Final Report. London: School Curriculum and Assessment Authority, 1994.

39. ibid.

40. Similarly, the biggest change for another teacher (T3/1)is that in the last 5 or even 10 years teachers are much more dealing with administration. "What has gone now for me... [is] that in the past there was a larger sense of community... I knew lots more parents, I spent a lot of time with parents, I spent more time visiting homes. I mean that was the thing that used to happen. It doesn't happen now", she complained.

41. Pupils in another school (P3) also have their Council. It is composed from the representatives of each form. They have the opportunity to put forward things they like or they dislike. "Sometimes there are changes, sometimes not, depending on what teachers say. It could be better", they considered and explained that the main reasons for them not being more involved are lack of time, the system is not appropriate, and they haven't been encouraged enough. Because "the system is not right" was the opinion of one pupil, "sometimes we just don't bother. Because you know the teachers are not going to do anything, so there's no point."

42. He continued: "For example, we made geography a compulsory component for GCSE, which is not in the National Curriculum but most of our boys were opting for it anyway. We didn't want to have too much specialism too soon... And I think that's what parents welcomed."

43. For example, she said, some of the schools are not really comprehensive although they have 'comprehensive' above the door. They try to take only the most able children. "So, I think admissions should be [better] organized by [the LEA]... They are meant to make sure that [the admissions] operate smoothly and that it's fair."

44. In his opinion there are also areas of educational policy development, where the schools establish their own links: "if we want to introduce the new initiative as we are, the vocational qualifications [GNVQ]... mentioned earlier, we then approach national validating bodies like BTEC,... and seek their assistance in bringing the course in. Equally we may and do pay a consultant to come in and help us, for instance, to set up the most up-to-date new information technology."

45. He continued: "Not my idea, but I have to come here and talk to people and say 'You know, this is what you're supposed to be

doing.' And so I would be the person at meetings who gets the comeback. And that's ridiculous, as you know well, so on the one hand, I have the role of explaining to people that this is what you have to do. And you know that's not meeting the law... you have to do that. All the stuff about the National Curriculum assessment and about these tests that have come in, so I run all of this information about that and passing out".

46. He gave an example: "I mean it's quite interesting in the middle of the recent tests that have just been sent out that I was getting phone calls from schools saying 'I don't understand this about the tests... What are we supposed to do about this?' At the point when they've received them [the LEA has not yet]... I rang up SCAA... And then they said to me 'I'll warn you, you'll get yours eventually, but LEAs are at the bottom of the list as it were. So you'll have to wait. When we've done all the schools we'll send you yours.' There was this sort of sign there of the priorities that are given to LEAs."

47. LEAs' work, the adviser explained, very much depends on the grant they get from the government: "Although the money comes you do have to make bids for it, so we have to make very formal plans to say this is how we are going to deliver our work... it has to go back to the DFE and then they see if we are actually doing what we are supposed to and then they give us our money or not."

48. She added: "I mean the one factor that people look at are a school's exam results. Seven or eight years ago 17% of students got A's to C's in their GCSE's and now that figure has gone up to 48%."

49. The respondent explained: "it is sort of saying how closely is the general spending in this school and the general use of the teachers time and resources... how closely is that... aligned to its aims and its goals on what's being done... I think it is a little bit muddy,... the distinction, isn't it?". He also pointed out that "only a couple of years ago it [The Total Quality Management] was very much the word... now we have 'Investors in People Initiative' [which is] linked to the appraisal of staff as well... the idea of making the most of all the individuals within the institution."

50. "The records are kept in school... [and] all the staff who are appraised,will have a written report of their appraisal", explained one teacher (T2/1) adding that these are mostly records on wages and previous teaching experience.

51. Before, he explained, there "was just a report at the end of each year. They still get the reports but at the end of their time here, they also take away this folder, which contains different statements including

details on how they did during their years here, and what they have done outside the school of which there is evidence... Any special skills they have also picked up go into the folder. So the folder describes the person as such and not just the person's academic skills."

52. He also expressed some concerns: "the worry is that in some way... with the Dearing review... this could change... because there was a lot of criticism of too much work, and too prescriptive. And Dearing view has been to... to say we are not telling you what to do during the key stage but we are saying that at the end of the key stage so at 7, 11, 14, you got to cope with the level and overall view where the child is. Now the problem with that is for the schools on the ground that they want to be keeping records cumulatively, they don't want just to forget about it and then suddenly at 7 or 11 try and think about where are these children. They want to be using record keeping as ways of making decisions about what to teach next, how to plan for their teaching... A lot of schools at the moment are thinking about 'What can we do? We have been given criteria for judging pupils at the end of the key stage but we need to be thinking about criteria we could use cumulatively during those two years, four years. Otherwise we must miss the target at the end of the key stage, we might be teaching, learning and assessing different things and then suddenly finding not what we should be doing because it doesn't match with the end of the key stage.' They are trying to look at that. So there is a lot of work going on there."

53. He said: "We try to make it not just a list of things... there's a diary, [and] we also have snippets of information." He also pointed out that much information passes around the school in a verbal form through meetings.

54. This respondent clarified: "If it has to do with any of my subjects, then it would be my head of department; if it's [more general about pupils], then I would work through the head of year; if it involves finance, I would see the deputy head. This is because everybody has to cover a specific area, so the staff know who to refer to." He also gathers information from outside the school: "I obviously contact the... agencies when... needed... I organise sixth-form assemblies so I have contacts with local churches etc. So I have a whole range of contacts outside the school that I use."

55. In the same school another teacher (T1/3) concluded that communication with other schools is very weak. "We are not as close as we were... a sort of minimalist approach really", she added.

56. The respondent concluded: "I don't find my work held up because I can't find out things. I can always find it out. It may not be immediately apparent but I can find it out if I need to. I know where to go, whom to ask to find it out, generally."

57. He added: "But there are certain areas where you have to try and look into a magic glass just to see what would happen if there would be the change of government, and could we cope with certain subjects, for example, technology."

58. One teacher (T3/1) said: "I think that there is much more and easier to get"; and another (T4/1) considered that "the ways students records are now kept. I couldn't tell you where the staff records are, maybe they are locked away." She also explained that the information about the children who will be coming to the school next year, she gets when she visits primary schools. "That's not a problem, I get quite a good little profile of each child when I go, but it's where they are actually at in the curriculum which is late in getting to us", was her comment.

59. She continued: "In a boarding school people do tend to be a bit protective about... information about certain people. [But if you really need it] you can get it... Again, we have quite regular times when we grade them and they'd all be circulated... in the common room."

60. His post in the LEA "is far wider than the record of achievement side. It has to do with assessment and records and reports in schools, reports to parents. And it's across all phases so it goes right on from nursery school through." On the one hand, he explained, he has now a view about the quality of performance of schools, and on the other he is trying to help them improve the quality of their performance.

61. He also added: "You could have criticized British primary schools I think fifteen years ago for not putting enough emphasis on the academic, being very concerned with personal, social development. The effect of the National Curriculum has been completely to turn that over, so that now they are very much into these criteria of academic performance. I think it is fair to say, at the expense of time for actually looking at the personal and social development. And some of that has been neglected. It swung that way, maybe it will come back again, hopefully."

62. She explained: "We had most of the information from the primary school by the October half term this year, and that was the soonest we've got it so far, but of course we really need it before then in order to plan curriculums properly. But they too need their records until the last minute, so it's catch 22 really."

63. Two respondents considered that not much of the information is coming to them. "I think it's fairly static in my particular [subject] area." said one teacher (T4/1) and the other (T3/2) commented that the syllabus tells them exactly what to do and "there's nothing to discuss about it."

64. Another teacher (T1/1) explained: "in curriculum and staffing, lets say, we've been used that authorities would say you are allowed to employ so many staff. Now we go to the governors and say can we have so many staff to cover it?". The same teacher also said "Finance... There is more and more on that, much more on that."

65. If the schools want to get more information in this area, "there are telephone numbers, but I don't think that the government system could cope with it if everybody would take that option." said the same respondent and concluded that sometimes he acts like a link between schools and government. If three or four schools ring about the same thing, he then phones the DFE to try and clarify it and then get back to schools. In another LEA, commented the adviser (A2), "we know about who is breaking the law or not... we have got the legal department here anyway, but I wouldn't say that is a high priority, and it's not something I would go overboard on. But we do try to make sure that we're always doing what we are supposed to do."

66. This was confirmed by the statement of another teacher (T3/2) from the same school who does not communicate with teachers from other schools. "Not officially and formally. Only if I have some friends that teach [the same subject]."

67. The comment of this teacher was also used in the context of 'information communication and dissemination', p.278.

68. The respondent further explained: "Schools know that we carry certain statutory rights. For example no school can refuse if we rang up that we are coming, they can't say no. Luckily it is not a contentious issue between us and schools. We've never ever been told 'don't come'. We couldn't be anyway but there is no animosity between ourselves and schools in terms of what we are to do. We do trek sometimes a fine line between the training role and the advice role, and then the statutory role. Where throughout the year perhaps we would be giving information, giving help, suggesting ideas for improving certain things, classroom practice, marking, etc. But there is a point where we go in and ask whether they've done it or not. And schools accept that."

Chapter 6: THE COMPARISON; AND THE CONCLUSION OF THE THESIS

6.1 Overview of theoretical propositions

This thesis has been exploring EMIS within a larger framework of educational management changes in societies which are or are becoming postindustrial. The central argument tested in this thesis was that societies which move from industrial to postindustrial production and organization experience certain identifiable changes in EMIS. The developments in EMIS were at the theoretical level presented as fordist and postfordist EMIS ideal typical models. The propositions of the two models were explored in two countries, Slovenia and England.

This chapter has several jobs: it recapitulates the major theoretical themes of the thesis; it summarizes and compares the fieldwork findings; it relates these findings to the theoretical propositions; and it concludes the thesis by an overall interpretation of the EMIS situation in both countries and by offering several suggestions for further work.

In developing the main argument, the thesis first focused on interpretations of social and educational changes in the last century. The rise and development of general management and educational management theories was analyzed. This exploration showed that there are many theories which

try to explain social, educational, and management developments in this century. Among them, are theories of industrial and postindustrial society, theories of postmodernity, and postfordist theoretical concepts. Selected themes from these theories were used in this thesis to develop and clarify the main argument.

Prior to the discussion about educational management, the development of general management theories was analyzed. Through this analysis, the thesis showed that studies of management, as a separate field of study, started at the beginning of this century in societies which were industrialized. Since then, it was pointed out, concepts and practices of industrial management have had a great influence on educational management. This influence did not stop even after the field of educational management study was established in its own right.

From the analysis of educational management, the thesis moved to the analysis of EMIS. Educational management information systems, studied in this thesis as social phenomena, show all the complexity of social reality and are not easy to identify. Complex social environments and the lack of research and literature in this area make the task difficult and lengthy. To develop the main argument, this thesis established an understanding of EMIS.

The definition adopted took the form - against industrial and postindustrial social developments - of propositions about two ideal typical EMIS models: the fordist and the postfordist, which are affected by the theories and

practices of general educational management within which EMIS works.

Some fordist and postfordist educational management principles were established, against the literature. It was pointed out that the leading principles of fordist educational management are those of a 'rational' organization based on Weber's typology of bureaucracy. The management and organization of education in industrial society was defined as highly hierarchical with detailed job descriptions and detailed rules of behaviour. It was shown that this kind of management relies on the predictability of educational processes. Within fordist theoretical propositions, educational policies are created at the top of the educational system and work through linear vertical sets of procedures in place in the system. In parallel with educational policy implementation, control systems are established to prevent any deviations from the planned policy.

The thesis then proposed the principles of postfordist educational management, although they do not show such a clear pattern as the fordist principles. The thesis argued that centralized, hierarchical, and bureaucratic educational management is, in postindustrial societies, being replaced by looser, open, and more flexible structures; and old roles and rules are being replaced by possibilities for more creative conduct and a capacity to cope with the changes and the ambiguity of postindustrial education. The thesis suggested that flatter hierarchies are replacing old, vertical ones and that previous centralized educational decision making is becoming decentralized in many aspects, including curriculum, finance, and staffing.

This analysis of educational management principles was tightly related to the propositions of the fordist and postfordist EMIS ideal typical models. Every EMIS, it was suggested by this thesis, pursues certain purposes, performs certain tasks, covers different information categories, and reflects certain educational management principles.

Within industrial educational management, the thesis suggested, a specific type of EMIS develops - the fordist EMIS. In this ideal typical model, information systems in education serve predominantly to transmit information on educational policies, in the form of directives, from the top to the bottom of the educational hierarchy and bring back the information to control policy implementation. Such fordist EMIS also focus on information to measure 'efficiency' and develop numerous statistical indicators to follow the cost-effectiveness of the educational system. Also important, and therefore regularly collected, is statistical information covering students, staff and institutions. The information collection and availability of information to a larger public depends on the degree of centralization of EMIS decision making. Communication between individuals and organizations of educational system is mainly formal and limited by job descriptions.

A postfordist ideal typical EMIS model was, in this thesis, identified as more open than the fordist in terms of information exchange. It was suggested in the model that not only the availability of information increases but also that the content of information, which is collected, changes. The information needs of different parts of the educational system

are taken into account and information categories covering curriculum matters, students' progress, and evaluation and research in education expand increasingly. In this respect the thesis proposed that quality of education is becoming a central purpose of postfordist EMIS. The thesis also suggested that, in the postindustrial educational context, responsibilities for educational development are divided between different institutions and these institutions use EMIS to monitor educational development. Communication processes also become richer as nonformal relations between institutions and people are encouraged and are supported by information technology.

The two models proved to be an extremely useful theoretical tool to explore a complex phenomenon. The balance of EMIS elements illustrated in the field were an interesting mixture but it is also possible to indicate directions of developments - both reversions to 'fordist' practices and increased 'postfordist' tendencies. The comparison has another important methodological bonus. It helped the thesis to contrast two very different countries.

The comparison showed that there are many similarities which these two countries share in their emerging EMIS systems. Overall, the main argument (that EMIS in postindustrial societies develop in a similar way), stands, but with important comparative variations, and contradictions.

6.2 Comparison of educational management in England and Slovenia and with the theory

The theoretical propositions about EMIS and educational management were tested in the field, in England and Slovenia, and in the two previous chapters the findings were analyzed for each country separately. In this chapter the fieldwork findings will be compared with each other and placed against the theoretical propositions.

What were then the main similarities and the differences between the two countries and how well do they correspond to the theoretical suggestions of this thesis? This analysis first focuses on educational management and then on EMIS.

The analysis of the interviews conducted in Slovenia and England confirms some of the documentary analysis, indicating in both countries an increased speed of change in the area of educational management. In England, this process began to be evident some fifteen years ago as a 'greater push within schools' towards accountability. The increased accountability, expected from the teachers, heads, and schools in general, was in the field seen as a response to the new demands by parents, by employers, but above all by the government. The intentions of the Conservative Government to introduce a standardized curriculum, to assign more management responsibilities to schools, and to increase control over educational expenditure and outcomes were legalized with the Educational Reform Act in 1988. The National Curriculum was introduced in English

and Welsh primary and secondary schools, followed by an insistence on the schools' new responsibilities for successful results within the overall national testing scheme and new management duties (Local Management of Schools).

Respondents in England clearly indicated that with the new management style, schools have on the one hand benefited, and on the other their primary role, the teaching, has altered: schools have become more 'business' oriented and have lost considerable control over their academic role. New financial responsibilities and National Curriculum requirements have increased consultation, coordination, and team work of school staff and school governors. Teachers have never before been so much involved in management and the classical division between teaching and management has been disappearing. School staff have also been compelled to undertake demanding and rigorous planning, and must always consider the financial implications of action. Increased management involvement and paper work are consuming energies and time which were previously spent on work with pupils.

Another significant issue that came out from the field work in England is confirmation of the changed relations between educational institutions, LEAs, and government. With the government and schools now taking over many of the LEAs' previous duties, the government has increased its direct influence on the schools. Both changes have created greater bureaucratic procedures throughout the educational system; schools have escaped some of the control from LEAs but also lost much of their support. Government

is now working more directly with schools; major educational decisions are made centrally and are delegated to schools. But the impression was that many of the changes are not backed by appropriate financial and other support. In some cases the local governments, which are still in charge of grant allocation to schools, tend to influence school management.

The reasons for educational management changes in Slovenia are quite similar, on the evidence of the responses, to those in England. The national economy and general social developments are considered to be a generator for both political reforms and educational reform. As in England, there are evident changes in schools. But, contrary to England, the abolition of the old and the introduction of a new curriculum has increased teachers' autonomy in class. In Slovenia, creativity and innovations in the teaching process have been encouraged. Respondents consider that control over curriculum matters has loosened, but at the same time control over financial management has expanded. In overall management terms, individual responsibility (accountability) has replaced previous collective decision making (self-management). Interviews also showed that, in Slovenia, in contrast to England, new management principles have been well and relatively quickly introduced to schools; but the same is not true for the upper administrative levels of the national educational system.

Within these changing educational management principles, three were of special concern in the field work: hierarchical structures with bureaucratic relations, centralization, and control. In both countries the evidence shows that there has to be a separate discussion of the three issues, that is, within

educational institutions and in the schools-government relation. Schools in Slovenia, in the views of participants, had always had relatively flat hierarchies. Only in cases where schools are large have the hierarchies been steeper. In the English tradition, secondary schools have been, comparatively, rather hierarchical, with vertical structures. In the last ten years they have changed a lot. There is a greater awareness among participants in England that structures have to become more horizontal, but it was also indicated that the attitudes of people in education change slowly, especially in public schools. In terms of hierarchy, changes in schools in both countries indicate that hierarchical structures are becoming postfordist.

On the top governmental level the nature of hierarchical structures in both countries has not changed in the same direction. Because of the tendencies of the both governments to centralize specific areas of educational decision making (by taking the powers from LEAs in England and from the Board of Education in Slovenia), old hierarchies persist and are even becoming stronger in the view of respondents. These developments are, within the terms of this thesis, fordist.

Hierarchical structures are related to bureaucratic characteristics of educational management. In Slovenia the major problems on the way to more successful (quicker) decision making and management are the slow bureaucratic procedures and a rigid mentality, especially at the system level. The respondents' impression was that administration at the system level tends to make schools and programmes more standardized, so the

work of central administrators can be made easier. Therefore, again a fordist layer of educational management within the Ministry of Education is evident in Slovenia.

In England too, in terms of bureaucratic procedures, a fordist management motif can be noticed. The main concern expressed through interviews was the growing regulation of education and increasing paperwork, affecting much of the educational system.

Some specific changes in control were identified in both countries. In the English context schools, as already indicated, have lost a lot of their control over content issues and gained greater financial control - examples of both fordist and postfordist developments. In Slovenia these processes in the last few years are reversed: schools have gained relatively in their control of their teaching or learning contents and lost control on the financial side - a reversed example of both fordist and postfordist management changes. Also interesting in terms of control are the changes in appointment of the headteachers. In England it is schools who now appoint heads, a postfordist element, which was the case in Slovenia some years ago. The nominations of heads in Slovene schools have now to be approved by the Ministry of Education (for secondary schools): a fordist motif in new controls.

Nevertheless, there are strong postfordist themes in the educational management changes. Parts of the educational systems in both countries have been moving away from the fordist type of educational management towards the postfordist. New management responsibilities have been

delegated to schools, like finance in England and curriculum management in Slovenia, which means an overall loosening of hierarchical structures. At the same time encouragement of team work and encouragement of individual creative contributions to educational management have been noticed in schools Teaching and management functions in schools are shared and parents are becoming more involved. These phenomena are all typical, as theoretically suggested, of postfordist management.

However, at the same time certain aspects of educational management are remaining or are even becoming fordist. The fieldwork, for example, showed that national educational policy making has in both countries after the latest educational reforms, became more centralized; and the control mechanisms, especially over educational outcomes (in England: national standards) have been strengthened.

In England, the National Curriculum is the most evident example of these changes. These findings and the fact that this system was criticized for the lack of consultation indicate a fordist policy implementation process.

The same feeling that control in education is increasing, that central educational authorities have too much power over education, and that the schools' (teachers') voice is not heard enough - fordist motifs - was expressed in Slovenia. The characteristic of the Slovene policy making process is that it is not as transparent as in England. The main reasons for this situation which were identified in the field were: that the responsibilities of different subordinate institutions, boards, and

departments, related to policy making, are not clearly delineated; that the Ministry lacks adequately educated staff; and that the general strategy and vision of future Slovene education is not clear enough. These reasons confirm an inefficient fordist stance - and prevent postfordist developments in educational decision making.

However, changes in every day management are becoming evident. Postfordist management is characterized by the sharing of management and professional activities in schools. In this sense postfordist developments, in both countries, are visible in the fact that day to day management activities of teachers have increased. But these activities are much clearer and developed in England than in Slovenia; the changes are more evidently postfordist, in English schools where management responsibilities are delegated to almost every teacher and are considered to be part of their task[1]. In Slovenia the involvement in management mainly depends on the initiative of individual teachers; a postfordist tendency, but also not one which is yet confirmed by structural support.

The heads' role in school management is also becoming postfordist. The 'old style head' whose characteristics have been, with some crudity, described as being based on an introvert personality, authoritarian attitudes, noncooperation, convergent styles of thinking, and one way communication[2], is disappearing quite quickly in England and a bit more slowly in Slovenia[3]. The new style of management which heads have adopted poses a classificatory dilemma. On the one hand they are developing a clear vision of school development and increasing the

communication between school staff, pupils, parents, and community. In itself this is postfordist. But on the other hand, their involvement in the academic side of school life has become more limited. They are distanced from the core work of schooling (teaching) and are becoming more managerial; a postfordist development by and large, as the locus of management has moved down the system, but a rather empty postfordist development.

The involvement of pupils, parents, and the local communities in every day educational management has also been explored. In postfordist terms all three groups of people should be important decision makers.

The evidence from the field did not show postfordist developments in terms of pupils' influence. More than forty pupils aged 14-19 years were interviewed[4] in both countries and the majority said that pupils should be more involved in school management. Although formal student bodies (e.g. year council, school council, school parliament) and student representation exist in both countries' schools, it was found that pupils lack the knowledge, skills, and time to be more influential. Presently, in both countries, pupils seek informal ways for 'their voice to be heard'. This very much depends on individual teacher's and a headmaster's attitudes and on the size of the school - in smaller schools pupils tend to be more influential than in larger. Clearly full postfordist structures to deal with pupils have not jet been developed.

Local Management of Schools has brought parents in England greater

responsibilities in school management, a clear structured postfordist development. The situation in Slovenia depends on the individual school. Formally parents have had their representatives on School Councils since 1980, but it is only recently that they have become more interested in schools' development. The general tendency is in a postfordist direction, but the structures for parental involvement are not fully developed in Slovenia. The same situation is that of local communities and enterprises[5].

One of the groups of people that had previously a much greater role in school management are the advisers, from LEAs' in England and from the Board of Education in Slovenia. Although their involvement before was a fordist one (inspection, control), they have not gained possibilities to change to postfordist ways of decision making. It is not so much that their roles are now fordist or postfordist. In so far as many of them are now used for advice and consultation (rather than inspection) the tendency is towards postfordism. But the central point is that, for different reasons in both countries, they are now increasingly marginalized. They are becoming weak participants rather than major players within clear fordist or postfordist management structures.

In sum, day to day management in both countries is, despite many controversies and problems, showing more postfordist than fordist principles. The comparison now continues with the central focus of the thesis - the EMIS.

6.3 Comparison of EMIS in Slovenia and England and with the theory

The comparison of recent developments of educational management information systems shows the differences and similarities between England and Slovenia and between the fieldwork findings and the two ideal typical models. Here, as well as in the early chapters, the discussion follows the same order: first the purposes, then the tasks, then the information categories, and finally, the management principles of EMIS.

The fieldwork in both countries has shown that EMIS **purposes** in many parts of the educational systems are changing from fordist to postfordist. First of all an overall opening of information space in education has been recognized in Slovenia and a greater availability of educational information noted in England. Fordist EMIS mainly supports governmental policy implementation which is partly the case in both England and Slovenia. The findings from England show that within the greater amount of information coming to schools there are also more instructions from the government, but still less than before from the ILEA. Similarly, in Slovenia, schools get more information but fewer directives than before. Nevertheless, the postfordist EMIS purpose of making information exchange easier is not evident between schools and government, because in both countries, government to school communication is mainly one way.

The situation is different in schools. In many schools, for example, the purposes of the information systems are clearly postfordist. Although in both countries the use of EMIS often depends on individual staff and their

need to exchange information, the awareness of EMIS development in terms of postfordist purposes is high. In some cases in England special consultants (e.g. SIMS) have been included in EMIS development. Overall, the findings support the idea that more information should be exchanged (and is being exchanged) within schools.

The next fordist EMIS purpose, control over implementation of educational policies, has also been changing, but not necessarily towards the postfordist propositions. The findings from Slovenia, for example, show that ten years ago control was an important purpose within EMIS. EMIS was predominantly fordist. School reports, inspectors' reports about schools, and numerous statistical forms created a feeling of great pressure in schools. The former EMIS offered information only to those in particular positions of power. Nowadays, as the findings demonstrate, more and nonselected information is coming directly to teachers. Inspection and reports and forms have been replaced by headteachers monitoring the development of the school and the Slovene introduction of national testing. As certain aspects of education are becoming more controlled, it is possible that EMIS, related to these aspects, will in future become more fordist.

The findings in England have already shown similar developments. A specific demand for information collection from the DFE confirmed that certain areas of education are more controlled than before (e.g. curriculum) and certain are less than before (e.g. staffing, school developmental goals), and are monitored by schools governors. The important point here is that EMIS tend to become more fordist than ever before in some vital areas of

the educational system.

The third purpose, identified in the ideal typical EMIS models, relates to information and the provision of educational efficiency and quality. The suggestion of the postfordist model is that information on the quality of education becomes more important than the information on efficiency, which is predominant in the fordist model. The fieldwork findings showed that both efficiency and quality have become more emphasized in both countries, but in different parts of the educational system. What has become evident in England and Slovenia is that governments today collect more information on efficiency, while schools, although still concerned with their own efficiency, are seeing this more in terms of collecting information about their own quality than before. National educational authorities in both countries are more interested in information that would allow them to compare schools; while schools (or individuals in schools) are concerned with establishing ways to get more information about the quality of the educational process. Again schools adopted a more postfordist approach to EMIS than governments.

Comparing then the purposes of the two ideal typical EMIS models with the findings from field it was recognized that the postfordist purposes of making access to information easier, of monitoring educational development, and of providing quality indicators were emphasized in schools in both countries. At the same time it became obvious that governments still, or even more, use EMIS for policy implementation, its control, and control over the efficiency of their policies - which are fordist

EMIS purposes. The balances of fordist and postfordist EMIS purposes are clearly related to the involvement of national politicians in the educational system: the more certain parts of educational system are politically charged, the less possible it is for the information system to become postfordist.

The comparison continues with the next group of EMIS elements - the **tasks**. The changed management environment in education in both countries is changing also the tasks of educational information systems. The first task of an EMIS is evaluation of information needs and setting the objectives, which is within the fordist model done by the state, while in the postfordist model different groups of people have influence. The fieldwork in both countries showed that on a national level, most of information is defined by the government, and is therefore fordist; while in schools and in LEAs in England this task is becoming postfordist.

For the school environment in England it was explained that it mainly depends on each individual how his/hers information needs are expressed and it depends on a school's working climate how the EMIS objectives are set. In Slovene schools, heads still play an important role in defining information needs, but the findings show that school staff information needs have been better considered than in the past. Many heads, according to the interviews, are not just informing teachers better, but they also transmit teachers' needs to other information sources.

Becoming more postfordist in Slovenia, on this dimension, is also the relation of schools and the Board of Education. As the field analysis

indicates, advisers from the Board and teachers consider each other needs, especially those related to the curriculum. In England, after the role of LEA changed so drastically, in many cases a partnership between LEAs and schools was developed in terms of this EMIS task.

Defining information needs on the national level has in both countries remained fordist. In England the DFE makes its own rules about what information is collected and there are very limited possibilities for individuals and institutions to influence information collection. In Slovenia the situation is worse. It is difficult to get even the information that is regularly collected on national level.

The nature of the next two EMIS tasks - the data collection and the analysis - has not changed very much on a national level in both countries. They have remained, apart from some exceptions, fordist. In Slovenia, for example, there are still numerous statistical forms that schools have to fill in. These forms are the same as in the previous system. Feedback is not always available. The information is numerical and does not deal with the teaching and learning process at all. On a national level in England, data collection (after the reform) mainly includes exam statistics, forms about attendance and punctuality, OFSTED inspection reports, and reports of audit commissions on financial aspects of schools. Many of these data, the schools collect by themselves and the LEA puts them together and sends them to the government. This data collection shows the characteristics of the fordist EMIS model.

The novelty in information collection in England are the staff Appraisal Records and pupils' Records of Achievement. Records of Achievement are collected for the whole time pupils spend in a school; they are descriptive and consider each pupil as a whole person including academic achievement, special skills, interests inside and outside school, etc. As these new records are also more structured, they demand a lot more time from teachers writing them than before. The nature of this data collection can be considered postfordist.

In Slovenia too schools collect basic information on staff and pupils. Pupils academic achievement is evaluated in numbers, called 'marks'. There is obviously a clear wish to move to postfordist data collection and analysis. As the fieldwork shows, many would like to have more descriptive and comprehensive reports about pupils.

The fourth EMIS task relates to the storage of information. Educational information is stored and available from a wide variety of sources in both countries. This EMIS task shows typical postfordist characteristics. In Slovenia the number of information sources, especially nongovernmental, has increased. At the same time the fieldwork demonstrated that problems still exist in obtaining a specific information from many of the existing sources. In England, compared to Slovenia, more information from a much wider range of sources is available to different groups of people. Information technology has been found extremely helpful in establishing new networks and in accessing different sources - a double postfordist development.

The last EMIS task is information communication and dissemination. In the postfordist EMIS model, communication is rich, supported by computer technology, and the access is not seriously limited; while in the fordist model access to information is deliberately limited and so is communication. Both aspects, the fordist and postfordist, of this EMIS task were identified in the field. In English schools communication has been found mainly satisfactory and it is still improving with the development of the computer technology. In Slovene schools, with more information becoming available, communication increases as well. But the fieldwork also showed that more contacts and permanent ways of communication have to be established in future. These aspects of EMIS communication show characteristics as defined in the postfordist EMIS model, although this has been more evident in England than in Slovenia.

The communication that has not improved, and that corresponds to the fordist ideal typical model, is that between schools and the government. Schools and the DFE in England, as the findings demonstrate, have no communication; schools only receive information from DFE. The communication between schools and LEAs moves towards the postfordist EMIS model where computer networks have been developed and where both sides decide together about the information to be shared. Almost non-existent is communication between schools. Headteachers in certain areas meet regularly, but as schools have different problems and as there is competition between schools, communication has not improved. Teachers from different schools presently do not meet regularly although the evidence showed that they should share more of their good practices.

Especially in the London area, the situation was described as 'more of a retreat within schools' since the demise of ILEA in 1990. Because access to information about other schools is so limited, this last aspect in communication is fordist, in its closures and blockages on information flow.

Communication between schools and the Ministry of Education in Slovenia, except from some postfordist examples of communication between Board and the schools, is fordist - and unsatisfactory. Communication between schools is still good, although competition is also becoming more and more noticed. Much improved, and much more open, now in Slovenia, is communication with the schools in other countries and some European organizations. There are promising elements of information openness here. A postfordist tendency is visible, but a great deal of work by individual schools is required before these developments could be called a postfordist tendency.

The third group of EMIS elements the **information collection categories** shows big changes in both countries. In the fordist ideal typical EMIS model, statistical information collection on students, staff, buildings, etc; information of legislation and finance are prioritized; while by the postfordist model curriculum, achievement, research and evaluation information collection are becoming more important.

Comparison of the theoretical propositions with the findings from the field shows that one of the information collection categories, which has developed in postfordist directions, is information about curriculum and

programmes. Information in this area has expanded enormously since the introduction of National Curriculum in England. This information is much more structured but its nature is such that it cannot be directly communicated to parents, it has to be interpreted. In Slovenia, too, much more information about curriculum and programmes exists than before. All major information is now published which was not the case in the previous system. Most of the problems affect some subject areas that are less developed than the others and where less information exists.

The information category on students, staff, and institutions is considered to be the weakest information category in Slovenia but it is becoming one of the most detailed in England. Because of the greater emphasis on this information category in England, a lot more reporting has been introduced into schools. In Slovenia this information, as one respondent noted, was not available before and it is not today. The fieldwork showed the need to collect more information about pupils' vertical progress and their social background which at the moment does not exist. The information about institutions is also difficult to obtain and is not accurate; as is true with the list of teachers for the separate subject areas. This pattern is neither fordist nor postfordist; it is merely inefficient.

The information category covering pupils' achievement changed dramatically in England and it is considered to be postfordist. The Records of Achievement, based on the clear criteria of the National Curriculum, are quite new in English educational system and they are updated all the time. Ten years ago schools were assessing and reporting on students randomly.

The new records are also becoming much broader in term of their view of achievement - not just academic but also the personal and social development of each child. Apart from individual records, in some schools a lot of information exist on targets and their achievement for separate courses, year groups, and institution as a whole. An information on schools' performance is also provided by the League Tables.

In Slovenia, the reasons why this information does not exist can be found first in fact that the criteria for individual achievement are not set yet. Many within the educational system are also opposed to the ranking of schools - a very fordist practice. Deeply embedded also is the present marking system in Slovene education. Many years will have to pass before individual pupils will be assessed in a descriptive and more comprehensive way. However, on the national level some information on schools' performance will become available when the final exams and matriculation will be properly in place. On this dimension, the English and Slovene systems of information will converge.

The next information category includes information about evaluation and research in education. In both countries it was found that more information is available in this category - a postfordist tendency. But a big difference between the two countries is that there is a lot more research and evaluation conducted in English education. Despite the fact that more information is available, many in the educational system in both countries are not able to make full use of this information because of the lack of time and the formats of research publications like: the language, the size, the

narrow focus, etc. In Slovenia, it was recognized, that too little research has been conducted in education; and that appropriate evaluation does not follow all new projects.

The important point that become evident in the fieldwork in England is that although much today's research is quite critical about the latest changes in educational system, it does not seem to have much influence on the national policy making, which is locked into a fordist model, and the non-permeability of research critiques merely emphasizes this.

The information about the next category - finance - remains fordist in Slovenia, as it is still not, and in some areas even less, available. However, it is becoming postfordist in England, especially at the school level. The information about finance has become more postfordist in England after the introduction of LMS when the schools took charge of their own money. Private schools have not moved in the same direction. The fieldwork shows that in the public school this information is not available. Despite postfordist developments in this category in England the evidence also indicated that financial information on a national level is not satisfactory. Some of the suggestions are that the amounts each school spend per child should be published, and that more detailed information should be available on how much money is spent nationally, and on what; and not just the LEAs' grants.

The last category of information compared is the information on legal issues. In Slovenia this information category can be considered fordist as it

is similar to that of finance: or it does not exist or it is out of date. This information is missing mainly because of the way legal Acts are produced. Legislative changes, it was found in the field, are not systematic, and much of the new legislation is already behind of what is happening in schools.

In England information on legislative issues shows fordist characteristics. In the fordist EMIS model it was suggested that legislative information is one of the most important elements of EMIS information. In the case of England a lot more legislation has been produced since the Education Reform Act than before. All of it is regularly sent to the schools from the DFE, but in many cases schools needed further explanation from the LEAs. The information is therefore available promptly, but the formats are not always appropriate. The knowledge in this area has increased in schools in the last few years also because of LMS. Schools also have now to consider legislation from other areas, like employment legislation, which was before the concern of the LEAs.

The last group of EMIS elements compared between the two countries and with the theoretical propositions are the **management principles** built into EMIS. The information flows will be discussed first. The field work in both countries made evident that educational information flows in a mixture of styles through the educational system and thus there is a mixture of fordist and postfordist characteristics. Communication between government and schools in both countries is in general fordist, as it is vertical and one way. The same is true also of the communication between heads and teachers, and teachers and pupils in cases when heads and teachers are authoritative.

Communication is vertical and one way also between some schools and LEAs in England. Information flows in pupils' representation systems, between advisers and heads, and advisers and teachers in curriculum development in Slovenia were found to be vertical and two way - they are becoming postfordist. The same style of communication was also found between pupils and teachers or heads in both countries where the relations are friendly. Information flows that can be considered horizontal, but more than one way, in many cases in both countries are those between schools and parents; this type of communication was also noticed between advisers and officers of different departments within the Ministry of Education in Slovenia. - when, instead of collaboration, competition exists. Examples of horizontal, two way, and therefore typical postfordist communication, are the relations between some secondary and primary schools in England and between teachers in the same subject areas from different schools in Slovenia.

The second management principle of EMIS compared here is the formal and nonformal relations between those who exchange information. The prevalent existence of formal relations was, in this thesis, described as a characteristic of the fordist EMIS, while a mixture of formal and nonformal relations and the encouragement of nonformal communication was considered postfordist. The fieldwork shows that all respondents use both styles in the process of information management. The general impression in both countries was that nonformal relations in information management have increased and therefore correspond to the propositions of the postfordist ideal typical EMIS model. It was found, for example, that in

some cases the relations were nonformal to a degree that attempts were made to formalize them, such as in the school in England where they consider that more information should be documented and so made available to everybody who needs it.

As the information exchange on the one hand relaxes, and becomes more postfordist, on the other, there are still many examples of rigid formal information communication, as proposed in the fordist EMIS model. Some participants in England, for example, see school meetings as too formal and too hierarchical, as is information exchange between government and schools in England, while the relations between LEAs and schools vary from very formal to nonformal contacts. When LEAs exercise statutory rights, the relations are formal, but when they are in advisory role, the relations are less formal.

A general impression in both countries was that increased postfordist, nonformal relations not only allow people to gain more information but also slowly to replace 'cold' communication. Cold communication is the case of the relations within the Ministry of Education in Slovenia; while within schools and between schools and their environment, nonformal information exchange has been encouraged in the last few years.

The last information system management principle compared in England and Slovenia is EMIS centralization and decentralization. The ideal typical EMIS models suggest that fordist EMIS mean centralized information systems, while the postfordist EMIS are decentralized. The findings in

Slovenia show that EMIS was more centralized, and therefore fordist, ten years ago, but it still cannot be considered postfordist. This thesis indicated that when educational management in general is centralized, the same happens to the EMIS, and when management becomes decentralized, the EMIS becomes postfordist. Because management in Slovenia is still in transformation, the fieldwork shows that EMIS, especially on the national level, has not settled yet, that much information is not available, and that which is, often does not come in time. However, there is some evidence that EMIS in schools has even become more centralized than before, in the sense that heads in the new system are the most important information source. This is a fordist situation.

Although the fieldwork shows that in general there are many postfordist developments, like the sharing of ideas and increased communication within education and less centralization of information than before, some aspects of EMIS are still fordist. In England, for example, the DFE keeps much important educational information, which is not available to LEAs; and EMIS in private schools, like their management in general, tends to be centralized.

Centralization is the last EMIS management principle compared in this thesis. In the last section this thesis reflects on its findings and offers some suggestions for the future EMIS development.

It is tempting to suggest that all EMIS systems everywhere have a fordist EMIS element. Even in the United States where the legal responsibility for

much of education rests with the individual states, the Federal Government must collect certain national statistics and exercise control - through the collection of information initially - on parts of the education system; for example, in assuring that it functions in accordance with federal law. Thus in England and Slovenia - merely because there are national government level responsibilities - there are fordist elements. This however is not quite the point.

The point is that national governments can deliberately increase the fordist elements in their management of the national educational system. This was typically and deliberately done in the State socialist education systems of central and eastern Europe.

In 1996, the question is in which areas of educational management and EMIS have the two governments deliberately tightened or loosened the fordist elements in educational management and EMIS; and in which areas have they deliberately loosened control. Fordism and postfordism, when applied to education are not merely management styles from, and affected by, the economic arena; they are also political decisions.

Thus in England the fordist elements in educational management especially associated with the National Curriculum and the League Tables are deliberate fordist techniques of control; and even LMS is, whilst postfordist in its practices, also a deliberate political strategy aimed at enforcing financial responsibility and efficiency at school level.

Thus the 'balance' of fordism and postfordism in educational management and EMIS can be demonstrated in detail - a major effort of this thesis - but its mixtures should also be understood as part of a political strategy of change in the context of postindustrialism.

Similarly, in Slovenia there is a particular 'balance' or mixture of fordist and postfordist educational management and EMIS. For example, the new management approach to curriculum development is postfordist and less controlled; while centralization of finance and, as in England, the introduction of external examinations are fordist, and intended to increase control. This mixture should be understood as a deliberate policy of the Slovene government.

6.4 Concluding reflections of the thesis

This thesis showed that both countries are experiencing important changes in education in the last decade. The thesis demonstrated that recent educational reforms in both countries have been conditioned by the general social, economic, and political developments of the postindustrial society. Along with the postindustrial developments which started in England approximately twenty years ago a 'Great Debate' in education commenced. It took more than ten years before major reform was introduced in education. The nature of the reform, the thesis indicated, not only reflects the need of a developed postindustrial society to change education, but also the general political stance of the Conservative Government: a free market

philosophy extended to the public sector, and tightened control over public resourcing and the control of service standards.

In Slovenia economic developments and the general social climate in the last ten years have led to radical changes in the political system. While moving away from its previous socialist principles of production and organization, which were leading the country to economic stagnation and international non-competitiveness, Slovenia introduced a multiparty parliamentary political system and opened the door to a free market economy. Considering political, social, technological and other recent developments, the thesis concluded that Slovenia is on its way to a postindustrial society configuration. Along with these developments major changes started in education - the most evident being in the curriculum and organization of the educational system.

Although the main focus of the thesis was EMIS, educational management, as a wider EMIS environment, was analyzed first. The thesis pointed out that developments in educational management in both countries reflect contemporary social trends. Though this thesis considers England to be an established postindustrial country and Slovenia in a transition to the postindustrial society, the comparison, as mentioned before, showed several similarities.

It was found first that postfordist changes in educational management are happening at the institutional level, in schools. In both countries educational reforms have brought increased management responsibilities

to the schools. Teachers, parents, and in some cases pupils have become increasingly involved in curriculum and finance management, in school planning and evaluation of planning results, in management of school equipment and facilities, and staff development. The postfordist management responsibilities of schools are changing relations between the people involved in school life - more consultation and communication has been noticed. Also, because the academic and management workload of teachers and some other school staff has increased, all schools are experimenting with and introducing new ways of organization, and are therefore moving away from standardized ways of fordist management. School structures have loosened and are also becoming postfordist, i.e. more flexible through team work, and more flexible and creative in procedures of decision making.

If the changes from fordist to postfordist educational management were clearly identified in schools, the thesis demonstrated that this is not the same with the national level of the educational systems in the two countries. All the evidence showed that after educational reform the DFE in England took over (or centralized) the key decision making functions. Among them are the most crucial functions of every educational system: curriculum development, external examinations, and much financial decision making.

The present processes of centralization of decision making on the governmental level in Slovenia only started with the new legislation in the last few years and are much less explicit than in England. This thesis

demonstrated that these policies have neither been justified in public debate nor have the efficiency consequences of centralization of finance been demonstrated yet.

The thesis pointed out that in both countries several fordist elements in educational management at the governmental level exist. Among the most significant are centralized policy making, increased control, more vertical hierarchies and new bureaucratic procedures. These aspects are contradictory to what this thesis suggested about a general move to postfordist educational management, in postindustrial societies. Most of these fordist changes is also not liked in schools.

The trends in educational management, this thesis showed, affect developments in EMIS. The changes of EMIS have in both countries produced an opening up of information space. However, the comparison showed that in both educational systems EMIS is still a mixture of fordist and postfordist characteristics, although the critiques and suggestions from the field suggest a postfordist direction in EMIS developments. The most evident contradictions are again between the EMIS developments in schools and on the governmental level.

What has become obvious in this thesis is that in both countries the gap between the operation of schools and the stance of government has deepened. The significant point is that EMIS in schools and their immediate environment is becoming postfordist, while the EMIS of the schools - government relationships remains fordist and in the English case has

become more so. The purposes of EMIS on the governmental level are still primarily to implement educational policies; to control their implementation; and efficiency is traced through the national testing and other statistical indicators. The major difference that was found in this respect between the two countries is that in England the purposes can be more easily identified than in Slovenia, though this does not in any way presuppose fewer fordist developments within the Slovene government. Schools in both countries showed postfordist EMIS purposes. They (to a different degree) tend to enlarge information space; along with the new ways of educational decision making, they are introducing new ways of communication; they use EMIS for monitoring school developments; and educational quality has been emphasized.

Despite postfordist EMIS purposes in schools the information systems show some deficiencies. In relation to the postfordist EMIS purpose of organizing EMIS to ease access to information it was found that still too much time has to be spent on information gathering and selection, especially in Slovenia.

This thesis also showed that governments and schools, although parts of one system, differ in other EMIS elements. They differ in the tasks of evaluating information needs and defining EMIS objectives; they give different emphasis to different types data collection and analysis; and they use different methods of information communication and dissemination. Again schools in both countries tend towards behaviour appropriate within the postfordist EMIS model and governments (plus their agencies) towards the fordist.

The thesis pointed out that the availability of information categories varies between the fordist and postfordist EMIS propositions. This thesis found that the overall situation is more postfordist in England, as more and better organized information exists in postfordist information categories of curriculum and programmes, achievement, and research and evaluation; while the formats of information, in both countries, are in many cases not satisfactory.

Finally, the thesis found that presently schools in both countries have experienced fewer postfordist developments in the management of EMIS, than they would like to. The thesis in the following section offers several suggestions to improve educational management and to move EMIS towards postfordist types of operation.

6.4.1 Suggestions for policy developments[6]

Though schools are increasingly postfordist in terms of their management and organization, and in their relations with their environment, they are also becoming more diverse than before. The thesis finds that there is great interest in schools to improve educational management. *The suggestion in this respect is that each school should develop their individual management structures rather than follow one of the many educational management models. There is much to be learned from the theory and the practice of others, but each school is a specific set of individuals and conditions.*

The situation in decision making at the governmental level in both countries was in this thesis found to be fordist, while the general opinion in schools is that decision making should be postfordist. *To prevent deepening the gap between schools and governments the thesis suggests that states should deliberately review this problem and deliberately develop more convergent styles of educational management in the educational system.*

In terms of EMIS purposes and tasks this thesis proposes that within governmental structures a more sensitive approach towards the different information needs of the professionals and users of educational system should be developed. More information collected on the national level that is of interest to schools and general public should be published or otherwise disseminated through the educational system. Especially in Slovenia, this would reduce a feeling of confusion and the existing gap between the state and the rest of educational system. Any resistance to this kind of development would mean a limitation of knowledge individuals need about the educational system in postindustrial society.

The management of information collection categories was found to be more advanced and postfordist in England. *Because of this the thesis suggests that future developments of the information categories in Slovenia should take English achievements, in the organization and the structure of the postfordist information categories and their dissemination, as one example, of increasingly successful practice and use the English example to review Slovene policy in this area.*

Another proposition is related to EMIS tasks. *To avoid information saturation and to assure even better access, the organization of information and its*

distribution should be revised regularly. The thesis proposes that future educational policies and research efforts in educational management in Slovenia be oriented towards improving two way communication flows and enhanced horizontal and nonformal communication between different parts of the educational system. This is because, it is suggested, the organization of information and development of the ways of information distribution will become one of the central educational activities of the 21st century.

This thesis started with the idea, expressed on many occasions, that having information empowers people. The research has shown two important things: first, that although educational information systems have not been researched, they represent an area which can contribute to a deeper understanding of education today. In this respect this thesis is a small contribution. Secondly, the thesis showed that there is a great awareness on the part of the teachers, headmasters, pupils, advisers, and some others in education that being informed in postindustrial societies is vital. It is likely that the pressure to build appropriate EMIS will increase in future. The thesis therefore concludes that both England and Slovenia have invested too little in the research on and the development of EMIS. Neither system is working efficiently and coherently, in EMIS terms, at the present moment. Both systems are underprepared, or incoherently prepared, in management and information terms for the 21st century, and for the challenges of postindustrial society. The matter is urgent, difficult, and under-researched.

6.5 Notes

1. An exemption was the public school, where day to day management still lies in the hands of a few people.

2. Mayer, J. 'Timsko vodenje in upravljanje' [Team leadership and management]. V Velikonja, M. (ur.) Menedžment v vzgoji in izobraževanju [Management in education]. Ljubljana: Zavod Republike Slovenije za šolstvo, 1995.

3. ibid.

4. Pupils were interviewed in groups of three to six people.

5. Many schools in England and Slovenia are, for example, sponsored by different enterprises.

6. Policy proposals are presented in italics.

Appendix 1:

QUESTIONS FOR THE INTERVIEW:

1. My impression is that the management of the educational system has changed and that in the last few years in the school system has become less centralized and more flexible. Do you also think that management of the educational sector has changed? If so, when and why did this happen?

2. As the system has changed, what new kinds of information do you need to do your job?

3. This new kind of information is for making the system more efficient or for improving quality?

4. Who now controls the educational system? For example, is there more influence at school level than before?
   OR
   Who has gained influence in educational management and who has lost?

5. Can I return to the theme of information and information flow? Nowadays, do you find that your information needs have changed in the following areas:
   - finance and legal issues?
   - programmes and curriculum?
   - student records, achievement, evaluation?

6. To summarize: are the 2/5/6 [see your list*] still centralized/controlled on higher levels? And have the 1/3/4 [see your list*] moved down the system to school level?

7. Has the new system included new kinds of information, e.g. information about research?

8. Where is the information you need and which we are talking about stored?
   OR
   Which are the main sources for the information you need?

9. Any suggestions in relation to EMIS?

* This list, a check-list, was placed in front of the interviewees. The 'list' is in this thesis, as Appendix Two.

Appendix 2:

MAIN EDUCATIONAL MANAGEMENT INFORMATION SYSTEM (EMIS) INFORMATION CATEGORIES:

1. Programmes and curriculum of different types and levels of education;

2. Students', staff and institution records;

3. Student achievement and criteria for achievement;

4. Evaluation and other research in/related to education;

5. Finance;

6. Legal issues.

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